

THE
PHRENOLOGICAL
MAGAZINE





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THE
Phrenological Magazine:

A JOURNAL OF
EDUCATION AND MENTAL SCIENCE.

EDITED BY
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AUTHOR OF
“MANUAL OF PHRENOLOGY,” “WOMAN IN THE TALMUD,”
“ONLY HALF A HERO,” ETC.

VOLUME I. 1885.

[NEW SERIES.]

LONDON : L. N. FOWLER,
IMPERIAL BUILDINGS, LUDGATE CIRCUS, E.C.

LONDON : PRINTED BY
GEORGE WILSON, MUSIC AND GENERAL PRINTER,
67b, TURNMILL STREET, E.C.

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THE
Phrenological Magazine.

JANUARY, 1885.

THE RIGHT HON. LORD NORTHBROOK.



HE likeness from which the inferences are drawn in reference to the character of Lord Northbrook presents some peculiarities. For the most part he is well balanced. When he has full control of his powers, he works easily, and readily gets hold of what he



has to do ; has no friction, and does not worry and chafe over things. He comes to the point at once. He is not so fearful of making mistakes that he does not act at all, but he

goes to work and corrects himself when he finds that he has made a mistake. He has a full complement of force and general energy and industry. He has more of the elements of modesty, respect, sense of obedience, and gentleness of character than he has of boldness or undue firmness. He decides upon the spur of the moment, and acts promptly, but is seldom stubborn or self-willed. He is always a good listener and readily takes advice.

He is not of a suspicious type of mind. Secretiveness may be rather large, enabling him to exercise tact where it is necessary, but Causality is not so large as to put him upon the anxious seat when there is no necessity for it. He is actually more anxious about others than about himself, and manifests more prudence and forethought when the happiness of others is concerned than when he alone is affected. One of the largest organs appears to be Benevolence, which gives undue kindness, gentleness of character, and urbanity of manner, and inspires confidence. From the first, people are drawn to him ; hence he makes many friends.

His mind is very impressible ; he is open to conviction ; has a strong consciousness of the spiritual life and existence ; and he must have been religiously inclined from his boyhood. He partakes largely after the disposition of his mother. He is versatile in manner ; not that he would excel as a mechanic, but that he readily devises ways and means to accomplish his ends. He has a keen sense of beauty, perfection, and style ; is naturally refined ; has rather strong imagination and not a little of the sentimental, poetical nature.

Order appears to be very prominent, and, combined with other faculties, would render him methodical, systematic, and well qualified to organize and superintend complicated work. He would also manifest order in his general life, habits, and conduct. He has a superior literary turn of mind and is able to describe and illustrate his ideas. He is remarkable for the availability of his intellectual power. None of his ideas are far-fetched, abstract, or difficult to comprehend. His *forte* is in his power to analyse, compare, criticise, describe, and illustrate. He should excel in making all his ideas plain. He is always acting with reference to definite results. He comes right to the point in what he says. He has not many preliminaries, does not wander in his style of talking, and is quick to perceive things and their quality and uses. Is equally quick to observe individual states of mind, and is remarkable for his intuitive power and perception of the state and tone of mind of others. He comes marvellously quickly

at results, for his mind sees everything in the light of truth or error, right or wrong, and many a time as a lad in school he could answer a question correctly and yet not be able to give his reasons; for Causality is not large enough to go into the abstract of things, or to go far back for causes. He is very apt in his remarks, and is fairly copious in his style of talking. He has a general good memory of what he sees and does.

Judging from his physiognomy and the form of his head, he has a strong social and domestic nature, and when business calls him away he returns as soon as possible after the business is completed. Is disposed to beautify home and make it attractive, and to see his friends there rather than to go out to see them. He would show good courage in defending home, family, and country.

L. N. F.

THE RELIGION OF PHRENOLOGY.*

1. PHRENOLOGICAL science has shown itself capable of throwing so much light upon the pathway along which the human soul has to travel in order to reach the chief end of its existence,—perfection of all its powers,—that some thoughtful persons among you have been led to ask—"What are the religious teachings of Phrenology?" Had you asked about its special sect, creed, or dogma, your lecturer would not have attempted an answer. As it is, the question implies a desire to know if phrenology has any power to exert, any word to say, that will tend to harmonise the apparent differences between religion and science. Such a question deserves the best answer that the science of human nature can give.

2. Phrenology first proves the existence of religious needs. It states that there is no faculty in the human mind without its proper sphere of action; without a need for its existence; without an actual demand that it shall be exercised. We have not to go far to see the relationship between the mental faculties, as recognised by the student, and the world upon which these powers have to act, and from which they have continually to receive impressions. Throughout the whole domain of the mind of man, the whole sphere of human action and passion, we find the mental powers, the need for

* A Lecture by Mr. Jas. Fraser, Phrenologist, of Auckland, New Zealand.

their action, the circumstances and surroundings calling them into action, running side by side.

3. We have Alimentiveness and Food, Bibativeness and Water, Acquisitiveness and Property, Secretiveness and need for its exercise, the Loves and the need for families, Parental Love and Offspring, Inhabitiveness and Homes, Continuity and the need for Patience, Cautiousness and Danger ; all these and many more faculties common to men and animals are forced into constant action by the exigencies of every-day life. These faculties exist ; there is need for their existence ; without them man would not be fit for his position in the world. The presence of a faculty implies a need for its field of action, as the Eye implies Light, and Ear Sound.

4. Look at the Intellectual faculties ; they again present to our view another phase of the same subject ; the whole range from first to last tells of special adaption of mental power to sphere of action. Individuality observes separate objects, individualises them ; Form notices their configuration ; Size, their magnitude ; Weight, their density and mass ; Colour, their shade ; Order, their relationship one to another ; Number, their plurality ; and so with every faculty. In order to understand any quality of matter we must have the mental faculty related to such quality ; no other can grasp it. Eyes and ears may be sharpened, one by the absence of the other, but neither can take the place of the other. True, there may be qualities of matter that we know nothing of, owing to the partial development of mental powers, or even their non-existence. As we grow we may learn more of these hidden qualities, as we have already learned something of steam and electricity, not known by our grandfathers ; but we shall never grasp a quality that has no correspondence with human faculties. Science already shows us that our senses, at any rate, are limited, and even hints at dangers that might arise from their extended action.

5. Take Light, Heat, or Sound. Study the senses relating us to these movements of matter, and we can begin to perceive our relationship to the world. The sun gives off visible and invisible rays ; our eyes can receive those that lie between the extreme red and extreme violet, but there are heat rays outside of one and chemical rays outside of the other. If the organ of sight was made sensitive to the former, it would be burnt up, and if to the latter, it would probably be destroyed by the chemical rays. As with Light, so with Heat. Men have endured a cold of 70° Fah. below zero, and, for a short time, a heat 250° Fah. above that point ; but here again we are limited : the cold of space would

stiffen the body instantly, and the heat of the sun's surface would as quickly turn every bone and every muscle into gas. Sound gives another illustration; the power of hearing is limited to somewhere about twelve octaves at the most—in many persons it does not reach to this. The range of hearing is between 16 and 35,000 vibrations per second.

6. It is so with every sense; each one is limited. Combined, they enable us to touch here and there what our higher faculties tell us must exist. Cut up the sense of feeling into three parts: Resistance, Touch, and Sense of Heat, and then we have a chain of feelings whose business it is to take notice of different rates of motion in matter. They are Resistance, Touch, Hearing, Sense of Heat, and Light. This chain of senses enables us to feel motions that take several seconds to complete each one, and others so rapid that 727 billions are executed in one second of time. The sense which receives and conveys to the mind the quickest of these falls short of catching chemical rays, and that which receives the slowest impression cannot perceive the tidal wave or the earth's diurnal or annual motion. Besides this, there are unfathomable chasms between the range of one sense and another. The highest rate the ear perceives is 35,000 per second, and the lowest rate the eye can catch is 435 billions per second. What becomes of the vibrations between these? Human senses can perceive but few of them; still they are surely produced, and affect the life both of plants and animals, though it may take some archangelic sense to make them palpable.

7. Although there are such distances between the spheres of the various senses, there can be no doubt that at one time the distances were still greater. This can be proved by a careful comparison between their range in different individuals. Some can feel, and hear, and see, and utter what cannot be seen, felt, heard, or uttered by others. Some voices have a compass of three or more octaves, while others are limited to two or less. The senses can also be modified by training. The sense of hearing and sight of an Indian hunter, the sight of a sailor, the quickened hearing and touch of a blind man are familiar instances of such changes. This being the case, we can see how the senses and other faculties may have extended their range. Some will say that the reverse is true, that the senses of a savage are more acute than those of a civilised man. This does not affect our argument; when such senses are quicker it is only on their own lower plane, and in their own range. Sweet scents, delightful harmonies, the play of lights and shadows, the

beautiful colourings of sunrise and sunset do not have much effect upon the savage ; in other words, the *range* of his senses is not so great.

8. Every sense must have had its starting point in the centre of the circle of its range of action, and that circle must have ever widened. That the action of each sense is still limited, the circles are yet a long way from merging one into another, has already been proved. There is a vast difference in the organ of sight as found in some fossils and that of an eagle. Turn over page after page of the grand epic story of Creation, as found in the rocks, until you come to the page marked Cambrian, and you find the remains of the first fossil fish. In place of scales it had a leathery skin, and where the eyes are placed in heads of the present inhabitants of crystal seas you find not even the rudiments of an eye. That fish had its abode in warm mud, and the sun's light had not yet pierced the murky gloom. There was no need for eyes and none were given. The trilobite of a later period had well-formed eyes, and all creatures since have had sight. The highest known development of this faculty is still finite ; there may be creatures as far above the eagle as he is above that ancient fossil. That the senses gradually diminish and finally die when not used is proved by the presence of eyeless fish in the dark lakes of Mammoth Cave, in Kentucky. Not only does each sense begin in a point, but all life has its small beginning. Human life begins in a point and in its changes runs through the gamut, appearing like several lower forms of life. Of the individual life, of the great race life, of each sense, of each faculty, it may be said, that it began in a point and gradually expanded. So, too, of each great idea, that by its evolution has changed the current and circumstances of human life ; it was once only a thought in a human mind.

9. Mental faculties grow. The growth of a faculty may easily be traced in human life. Size ; ability to estimate bulk, measure distances, &c., is a primary mental faculty. It begins by measuring distances as compared with parts of the body. We have the inch or thumb breadth, the palm, hand, span, foot, cubit, and fathom. It goes on to measure by performance—by day's journey, for instance. By its continued culture we measure by weeks' ride or sail, by months' or years' voyage, until at last the earth is spanned and its diameter measured. Then, with this diameter we step outside and measure the moon's distance, and then the sun's. In childhood, the next town is a long way off ; in manhood, the journey round the world is not so far. The distance to the

moon is not now reckoned far ; some sailors have gone as far as there and back, but the sun's distance presents a different problem ; to all ordinary minds, 92 millions of miles is an infinite distance. It is vast. We remember the railway train and cannon-ball calculations of our boyhood ; yet the faculty that one day uses the breadth of the thumb for its unit now takes this distance for a unit, and light, that travels it in little more than eight minutes, as its rod ; and armed with this unit and this rod it plunges into space. It now takes the earth's orbit as its base ; calculates the parallax of the nearest fixed star and finds its distance to be 551,000 times the unit, the sun's distance, and that it takes the rod $9\frac{1}{2}$ years to measure its span. It looks at the Pole Star and finds it to be 3,670,000 times this distance, and that a light ray requires 50 years to complete its journey. And so, step by step, it reaches out into infinite space, reaches the telescopic nebulae, and comparing distance with distance, it, at last, finds its mighty unit all too small, and reckons that its rod—swift-winged light, leaping through space at a rate that would put eight fiery circles round the globe in a single second—takes five millions of years to leap across the awful void that separates this speck of earth from them.

10. Number, the mental faculty that counts, presents a similar problem. It begins by counting the fingers and toes, and shortly tells us, with the aid of some co-working faculties, that the sun weighs 600 times as much as all his planets ; that the earth weighs 2,000 trillions of tons ; that the actual weight of the sun is 2,154 quadrillions 106,580 trillions of tons, and Sirius 100 times as much.

11. Time, again, another of the minor faculties, reckons by seconds, minutes, hours, days, weeks, months, years, decades, centuries ; then tells of precession of the equinoxes, and finishes with the cyclic year, whose last winter was a glacial epoch, and whose summer will come in 60,000 years. These faculties reach out to the almost infinitely vast, and also to the infinitely small. Ask a physicist what is the length of a wave of violet light, and he will answer 57,500 go in one inch. Ask how long it takes for one of these waves to make one swing from trough to crest and back again, and he will say that the period is to a second as the second to 40 millions of years. Ask him how many times he will magnify the surface of some object to bring it into view, and he answers four millions of times. So does each human faculty begin in some rudimentary way, and stretches out to the infinities of bulk and smallness, one as difficult to grasp as the other.

12. As number counts its fingers, and then the stars by

millions, so does each faculty act in some rudimentary way in all men. This is true of every mental power, every emotion, every feeling. It must, therefore, be true of those sentiments known as the moral and religious sentiments. There are savages who count their fingers and toes and who know nothing of a number beyond twenty, and there are men who make a cube with one hundred squares in its side, and thus convey the idea of a million. There are also savages who worship some fetish, and others who rise to a faint conception of an Omnipotent and Omnipresent God. As the ability to count fingers and toes proves plurality of natural objects, and the existence of a faculty of mind related to such plurality, so does fetish worship prove the existence of someone to worship, and the faculty of Veneration. It is inductively and deductively proved that there are several faculties in the mind that relate us to something not matter, and it is generally conceded that—

“Nature never gravitates to nought.”

These faculties are the moral and religious. They are the highest zone of his being, the furthest removed from mere animal consciousness, the least necessary for mere animal existence; so their organs occupy the highest part of his head, are the furthest removed from animal propensities, and are the least active in these days of eating, drinking, working, and getting gain. They are Conscientiousness, Veneration, Hope, Spirituality, Benevolence, and the higher action of Ideality and Sublimity. They are above all, looking upward, the skylights of the soul; the link between heaven and earth, between God and man.

13. We have seen how senses may have grown, and how they are related to their field or sphere of action. We have seen also how mental faculties have grown, and how they are related to the world of matter and the domain of observation. We come now to apply the same methods of observation and deduction to the religious faculties, to the ideas arising from their exercise, and to the relationship to something not material, which the presence of such faculties implies. We shall assume that as the eye implies light, the ear sound, the wing air, the fin water; so does conscience imply responsibility to someone, and veneration and spirituality, worship and faith.

14. Religion, broadly considered, presents three phases of action; can be divided into three great parts. They are the idea or conception of God, and consequent mode of worship, a faith, and a rule of life. Take these in any order you

please, they must be present, and one will not be found far in advance of the other. A man forms his idea of God through his ruling faculties and worships, believes, and acts accordingly. The ancient Britons conceived of a bloodthirsty tyrant, and burnt pyramids of human beings in his worship. The ancient Greeks had very human gods, and their faith, and worship, and life corresponded with their ideas. Universal history proves that the idea of God has not been far in advance of the intellectual, moral, and social status of the people who have formed that idea. In other words, these ideas have had their starting point and are growing; they are not grown as some suppose. Rudimentary faculties can only form, grasp and hold rudimentary ideas, and, with many persons, both religious faculties and ideas are rudimentary. Many people think that we have had our religious ideas fixed for us many centuries or even thousands of years ago. This is not the case; the religious ideas are the latest birth of the mind, because least necessary for the existence of the individual, and are therefore the least mature of human faculties. No one will have the hardihood to say that our intellectual progress was limited, or our ideas fixed for us, two or three thousand years since. If this be the case, why should anyone say that our religious ideas have been, are, or ever can be entirely fixed? We know that some have tried to fix the mind as in a vice, and make it think this, and believe that; and we also know that advancing religion in its reformatations, and advancing science in its discoveries, have often, even through torture and death, protested against such fixing of ideas, and broken the barriers down.

15. Our religious ideas are far from having attained to a stage of growth so near perfection as to guarantee their being fixed. Our best ideas of God, our grandest worship, our highest faith, our noblest rules of conduct, are so far from being perfect, that we may safely say that the religious life of the world has yet to begin. In spite of our boasted progress in so many directions, we have yet only reached to the very infancy of our religious life. Can we call the world religious while peace can only be kept (or broken) by the presence of ten millions of armed men in the most civilised portion of it—in Europe? Can we be called religious while all the commandments of the Decalogue are daily broken by the great masses of mankind, and while we regard the prison bars, the whip, and the terrible halter as the principal means of preventing all kinds of crime? Can we be called religious while among the so-called highest classes of society even social decency is not preserved? Can we be called religious

while we support, for the gratification of one perverted propensity, thousands of gin-shops, ale-houses by tens of thousands, and keep hundreds of breweries and distilleries constantly engaged in making earth's bountiful harvests into the maddening drunkard's drink? Can we be called religious while we have, in every city, even deeper depths of unnamed sin and woe, ruining the bodies and souls of millions of our brothers and sisters? We answer, *No!*

16. The history of the world's religious life has yet to be written, and the materials for such a history have yet to be prepared. How can we record that which is not and has not been? True, it has existed in name. Great religious systems have come and gone, great temples have been built, great battles fought in the name of the Prince of Peace. In the name of religion blood has been poured out like water, the tears of widows and orphans have been shed, and the groans of weary ages of suffering have gone up to the merciful Father, in whose name it has been endured and caused. All this has only shown what a great power religion will be in the end. That which is born through so much suffering, that which in its early dawn can so much influence the human mind, must have in it something which will materially affect the life of coming ages. The minds of men have been darkened, but the few rays of light from the sun, behind the sun, the source of spiritual light and life, have, even through and by these cries and groans; these tears and blood, shown something of what their power will be when the morning comes.

17. When religion becomes what it should and must be—a decidedly marked and leading feature in human character—each man will be a law unto himself; bolts and bars will be unnecessary; prisons will be ruins; standing armies a thing of the past; the art of war will be a lost art; the great social and moral curses of to-day will be gone for ever; the Ten Commandments will have merged into one; and, instead of one short period of time spent in dull worship on one day of the week, we shall have every act of life an act of worship, of voluntary surrender to the right, and the whole psalm of life encircling all earth's zones and stretching from pole to pole will be one psalm of praise. Before such a full, wide flood of religious life, the little narrow man-made creeds will fall like sand embankments before a rising tide, or fly like withered leaves before a wind. Before the grand, broad, full religious life that the science of mind says human nature is capable of, and to which it will eventually attain, all the sectarian differences, the dogmas, creed, articles, canons,

bulls; the little toys called rites and ceremonies, the cunningly devised fables and little, narrow, bonds and tricks of priestcraft, will vanish like a morning mist, or like the confused thoughts of waking from a dream.

“Then from the lips of truth one mighty breath
Shall, like a whirlwind, scatter in the breeze
That whole dark pile of human mockeries.”

(*To be continued.*)

AUTHORITIES ON TEA AND COFFEE.

SINCE the publication of my last I have been reminded of the high authorities who have defended the use of the alkaloids, and more particularly of Liebig's theory, or the theory commonly attributed to Liebig, but which is Lehmann's, published in Liebig's "Annalen," Vol. 87, and adopted and advocated by Liebig with his usual ability.

Lehmann watched *for some weeks* the effects of coffee upon two persons in good health. He found that it retarded the waste of the tissues of the body, that the proportion of phosphoric acid and of urea excreted by the kidneys was diminished by the action of the coffee, the diet being in all other respects the same. Pure caffeine (which is the same as theine) produced a similar effect, the aromatic oil of the coffee, given separately, was found to exert a stimulating effect on the nervous system.

Johnstone ("Chemistry of Common Life") closely following Liebig, and referring to the researches of Lehmann, says:—"The waste of the body is lessened by the introduction of theine into the stomach—that is, by the use of tea. And if the waste be lessened, the necessity for food to repair it will be lessened in an equal proportion. In other words, by the consumption of a certain quantity of tea, the health and strength of the body will be maintained in an equal degree upon a smaller quantity of ordinary food. Tea, therefore, saves food—stands to a certain extent in the place of food—while, at the same time, it soothes the body and enlivens the mind."

He proceeds to say, that "In the old and infirm it serves also another purpose. In the life of most persons a period arrives when the stomach no longer digests enough of the ordinary elements of food to make up for the natural daily waste of the bodily substance. The size and weight of the

body, therefore, begin to diminish more or less perceptibly. At this period tea comes in as a medicine to arrest the waste, to keep the body from falling away so fast, and thus to enable the less energetic powers of digestion still to supply as much as is needed to repair the wear and tear of the solid tissues." No wonder, therefore, says he, "that the aged female, who has barely enough income to buy what are called the common necessities of life, should yet spend a portion of her small gains in purchasing her ounce of tea. She can live quite as well on less common food when she takes her tea along with it; while she feels lighter at the same time, more cheerful, and fitter for her work, because of the indulgence."

All this is based upon the researches of Lehmann and others, who measured the work of the vital furnace by the quantity of ashes produced—the urea and phosphoric acid excreted. But there is also another method of measuring the same, that of collecting the expired breath and determining the quantity of carbonic acid given off by combustion. This method is imperfect, inasmuch as it only measures a portion of the carbonic acid which is given off. The skin is also a respiratory organ, co-operating with the lungs in evolving carbonic acid.

Dr. Edward Smith adopted this method of measuring the respired carbonic acid. His results were first published in "The Philosophical Transactions" of 1859, and again in Chapter XXXV. of his volume on "Food," International Scientific Series.

After stating, in the latter, the details of the experiments, which include depth of respiration as well as amount of carbonic acid respired, he says:—"Hence it was proved beyond all doubt that tea is a most powerful respiratory excitant. As it causes an evolution of carbon greatly beyond that which it supplies, it follows that it must powerfully promote those vital changes in food which ultimately produce the carbonic acid to be evolved. Instead, therefore, of supplying nutritive matter, it causes assimilation and transformation of other foods."

Now, note the following practical conclusions, which I quote in Dr. Smith's own words, but take the liberty of rendering in italics those passages that I wish the reader to specially compare with the preceding quotations from Johnstone:—"In reference to nutrition, we may say that *tea increases waste*, since it promotes the transformation of food without supplying nutriment, and increases the loss of heat without supplying fuel, and *it is therefore especially adapted to the wants of those who usually eat too much*, and after a full

meal, when the process of assimilation should be quickened, but *is less adapted to the poor and ill-fed*, and during fasting." He tells us very positively that "to take tea before a meal is as absurd as not to take it after a meal, unless the system be at all times replete with nutritive material." And, again, "Our experiments have sufficed to show how tea may be *injurious if taken with deficient food, and thereby exaggerate the evils of the poor*;" and, again, "The conclusions at which we arrived after our researches in 1858 were that tea should not be taken without food, unless after a full meal; or with insufficient food; or by the young or very feeble; and that *its essential action is to waste the system or consume food*, by promoting vital action which it does not support, and they have not been disproved by any subsequent scientific researches."

This final assertion may be true, and to those who "go in for the last thing out," the latest novelty or fashion in science, literature, and millinery, the absence of any refutation of later date is quite enough.

But how about the previous scientific researches of Lehmann, who, on all such subjects, is about the highest authority that can be quoted? His three volumes on "Physiological Chemistry," translated and republished by the Cavendish Society, stand pre-eminent as the best written, most condensed, and complete work on the subject, and his original researches constitute a lifetime's work, not of mere random change-ringing among the elements of obscure and insignificant organic compounds, but of judiciously selected chemical work, having definite philosophical aims and objects.

It is evident from the passages I have emphatically quoted that Dr. Smith flatly contradicts Lehmann, and arrives at directly contradictory physiological results and practical inferences.

Are we, therefore, to conclude that he has blundered in his analysis, or that Lehmann has done so?

On carefully comparing the two sets of investigations, I conclude that there is no necessary contradiction *in the facts*; that both may be, and in all probability are, quite correct as regards their chemical results; but that Dr. Smith has only attacked half the problem, while Lehmann has grasped the whole.

All the popular stimulants, refreshing drugs, and "pick-me-ups" have two distinct and opposite actions—an immediate exaltation which lasts for a certain period, varying with the drug and the constitution of its victim, and a subsequent depression proportionate to the primary exaltation, but, as I

believe, always exceeding it either in duration or intensity, or both, thus giving as a net or mean result a loss of vitality.

Dr. Smith's experiments only measured a partial result (the carbonic acid exhaled from the lungs without that from the skin) *of the first stage*, the period of exaltation. His experiments were extended to 50 minutes, 71 minutes, 65 minutes, and in one case to 1 hour and 50 minutes. It is worthy of note that in experiment I were 100 grains of black tea, which were given to two persons, and the time of the experiment was 50 and 71 minutes; the average increase was 71 and 68 cubic inches per minute, while in No. 6, with the same dose and the carbonic acid collected during 1 hour and 50 minutes, the average increase per minute was only 47.5 cubic inches. These indicate the decline of the exaltation, and the curves on his diagrams show the same. His coffee results were similar.

We all know that the "refreshing" action often extends over a considerable period. My own experiments on myself show that this is three or four hours; while that of beer or wine is less than one hour (moderate doses in each case).

I have tested this by walking measured distances after taking the stimulant and comparing with my walking powers when taking no other beverage than cold water. The duration of the tea stimulation has been also measured (painfully so) by the duration of sleeplessness when female seduction has led me to drink tea late in the evening. The duration of coffee about one-third less than tea.

Lehmann's experiments extending over weeks (days instead of minutes), measured the whole effect of the alkaloid and oil of the coffee during both the periods of exaltation and depression, and, therefore, supplied a mean or total result which accords with ordinary every-day experience. It is well known that the pot of tea of the poor needlewoman subdues the natural craving for food; the habitual smoker claims the same merit for his pipe, and the chewer for his quid. Wonderful stories are told of the long abstinence of the drinkers of maté, chewers of betel-nut, Siberian fungus, coca-leaf, and pepper-wort, and the smokers and eaters of haschish, &c. Not only is the sense of hunger allayed, but less food is demanded for sustaining life.

It is a curious fact that similar effects should be produced, and similar advantages claimed for the use of a drug which is totally different in its other chemical properties and relations. "White arsenic" or arsenious acid, is the oxide of a metal, and far as the poles asunder from the alkaloids, alcohols, and aromatic resins, in chemical classification. But it does

check the waste of the tissues, and is eaten by the Styrians and others with physiological effects curiously resembling those of its chemical antipodeans above named. Foremost among these physiological effects is that of "making the food appear to go farther."

It is strange that any physiologist should claim this diminution of the normal waste and renewal of tissue as a merit, seeing that life itself is the product of such change, and death the result of its cessation. But in the eagerness that has been displayed to justify existing indulgences, this claim has been extensively made by men who ought to know better than admit such a plea.

I speak, of course, of the *habitual* use of such drugs, not of their occasional medicinal use. The waste of the body may be going on with killing rapidity, as in fever, and then such medicines may save life, provided always that the body has not become "tolerant," or partially insensible to them by daily usage. I once watched a dangerous case of typhoid fever. Acting under the instructions of skilful medical attendants, and aided by a clinical thermometer and a seconds watch, I so applied small doses of brandy at short intervals as to keep down both pulse and temperature within the limits of fatal combustion. The patient had scarcely tasted alcohol before this, and therefore it exerted its maximum efficacy. I was surprised at the certain response of both pulse and temperature to this most valuable medicine and most pernicious beverage.

The argument that has been the most industriously urged in favour of all the vice-drugs, and each in its turn, is that miserable apology that has been made for every folly, every vice, every political abuse, every social crime (such as slavery, polygamy, &c.), when the time has arrived for reformation. I cannot condescend to seriously argue against it, but merely state the fact that the widely-diffused practice of using some kind of stimulating drug has been claimed as a sufficient proof of the necessity or advantage of such practice. I leave my readers to bestow on such a plea the treatment they may think it deserves. Those who believe that a rational being should have rational grounds for his conduct will treat this customary refuge of blind conservatism as I do.—*Knowledge*.

TRY to appear cheerful and contented, and your husband will be so; and when you have made him happy you will be so—not in appearance, but in reality. The skill required is not so great. Nothing flatters a man so much as the happiness of his wife; he is always proud of himself as the source of it.—*Justus Moser*.

THE HUMAN FACE DIVINE.

FROM the earliest ages men have endeavoured to discover the secrets of the soul from the lineaments of the face ; and although others besides Shakespeare have told us " There is no art to read the mind's construction in the face," few have believed them. Indeed, it seems an innate faith in man that the human countenance is, more or less, a mirror of the mind. In some it is certainly " more " and others decidedly " less ; " but, as a foreign scientist has recently assured us, the most astute fail to entirely prevent the workings of the mind from betraying themselves in the face.

The study of physiognomy is by many (and, as we think, injuriously) confused with others that—highly interesting and amusing as they may be—are much less solid, such as studying the character and determining the course and length of life by the lines of the hand, judging character by handwriting, etc. There may be much to be gained by these studies ; but for the understanding of your neighbour, there is nothing like the study of the face. Its lineaments may be hieroglyphical, it is true, but there is a key for their interpretation. Nor is it a matter of guess-work, although many " read " character without rule or " key," but intuitively, much as does a dog which, it is commonly said, has a " knack " of knowing men. This " knack " is simply the faculty some breeds of dogs have acquired, by long acquaintance with man, of discerning, from certain marks or signs in the countenance, the prominent traits of a man's character.

Solomon has said—and we have it on the authority of an American wit that the Son of David ordinarily spoke as much sense to the square inch as any man he ever heard of—Solomon has put it on record that, " Though the wicked man may constrain his countenance, the wise man can distinctly discern his purpose." And the wise King of Israel is only one of the number of the great minds of antiquity who affirm the truth of physiognomy. Sir Thomas Brown says : " The finger of God hath left an inscription upon all his works ; not graphical or composed of letters, but of their several forms, constitutions, parts, and operations, which aptly joined together, do make one word that doth express their natures." Of nothing is this so true as of the human countenance ; and to those who diligently study its " several forms, constitutions, parts, and operations," a rich reward is in store.

The study of the face should be commenced and proceeded with systematically. We should first take the face as a whole,

then sectionally. If we compare all faces, we discern a general resemblance ; so that, whatever its race or nationality, we can decide at once, "This is a human face." In all alike—in the savage as well as the civilized, in the lowest Hottentot as in the highest Greek, in the depraved criminal as in the most moral—we perceive the same broad general lineaments. The face may be long, as in the old Greeks, indicating a brain in which the intellectual and moral faculties were equal, if not superior to, the animal propensities ; or it may be broad, as in the Mongolians, indicating a predominance of brute force ; or it may combine the two, as in the Chinese ; but in all alike we find the same general proportions of one part to another, and of the parts to the whole.

For convenience of study the face may be divided into two parts ; one comprising the features from the chin to the eyebrows, the other from the eyebrows upwards. The forehead has been designated the seat of involuntary expression, as it cannot be changed, or, if changed at all, but slowly, as the gradual effect of culture. The space below the eyebrows is called the seat of voluntary expression, because it is largely under the control of the will. The late Mr. Darwin has shown in his interesting work on "The Expression of the Emotions in Man and Animals," to what an extent the face is, as it were, a mask, the expression of which may be changed on the instant by the action of muscles brought into play by the constantly varying feelings and emotions. Take fear or joy : how instantaneously they change the expression of the face. Or take the expression of good nature or of anger : how different they are. In the one, the eye opens and brightens, and the lines of the mouth—the seat, *par excellence*, of pleasurable expression—curve and soften ; in the other, the eyebrows contract and lower, thus darkening the eye, while the mouth becomes compressed, indicating that the teeth are in vice-like contact. When an animal is angry, its natural instinct is to bite, and if it can't bite the object of its anger, it grinds its teeth, because the excess of energy generated by the feeling instantly flows into the muscles of the jaws, and causes them to act in the most forcible manner, which is in the act of biting. Man, in his original state, was like the lower animals, and he used his teeth to bite as well as his hands to grapple, when angry ; and so, when he is enraged now, although he may not actually use his teeth to injure the object of his anger, he forcibly compresses his jaws, as in the act of biting, because his remote ancestors bit when angry.

Now, it is not difficult to comprehend that a man who is in the habit of frequently giving expression to angry feelings,

will, in the course of time, gradually mould his features to a form in accordance with this state of mind. There comes to be an habitual hardened line of the mouth, an habitual contraction of the eyebrows, and a tightened expression of the nostrils as of holding the breath. Persons accustomed to giving utterance to feelings of indignation, contract a similar though less hard expression ; for indignation is an emotion caused by an outraged sense of justice combined with anger or resentment. The same is true of the expression of other emotions ; so that the permanent or constant expression of the countenance gradually becomes that of the dominant emotions of the individual.

THE HYDEBOROUGH MYSTERY.

A TALE OF A GREAT CRIME.

BY CAVE NORTH.

CHAPTER I.

WILLIAM SOFTLY, HIS FAMILY, AND FAMILY CONNECTIONS.

WHEN our story opens, William Softly was Mayor of Hydeborough, and being what is called a self-made man he was, naturally enough, proud of the high position to which his fellow-townsmen had raised him, although the honour had been conferred upon him against his own expressed wish ; for the Mayor was one who diligently cultivated the virtue of humility, and mildly deprecated anything likely to foster the sin of pride ; and it appeared to him that, risen as he had from the very humblest rank, he was doubly in danger of being “carried away” by this deadly sin to his eternal hurt. However, as the dignity was thrust upon him, there was nothing else for it but to do his duty, and carefully guard himself from the danger he apprehended. He accordingly set anxious watch upon his heart and his steps, and if ever man “walked humbly,” that man was William Softly.

Native of a more northerly county, William Softly had come, in early manhood, to Hydeborough, where a place had been offered to him under the firm of which he was now the senior partner—then Blagg and Carruthers, now Softly and Blagg. Although, at first, he had held the position of a junior clerk, at a stipend such as is generally considered insufficient to keep body and soul together, he not only did not starve upon it, but managed to save money ; not much, it is true, but yet something. The envious said they wondered how he could do it, and look so respectable to boot : but the problem after all was not a difficult piece of arithmetic. He lived plainly, and indulged in no luxuries ; and especially did he eschew that most expensive of all luxuries, “fast” company.

Most young men of his day would have scorned his tame, almost colourless existence, in which a class-meeting or a tea-party proved the greatest excitement, and a country walk his chief recreation. But though looked upon by the young men of his own age as a spiritless fellow, and perhaps something of a milksop, William Softly nevertheless found his advantage—and who will not?—in the habits of prudence, quiet industry, and uniform courtesy which he encouraged. For one thing, his employers gradually found out his good qualities and his abilities—which though better than mediocre were never brilliant—and preferred him above others who were, perhaps, more talented but less trustworthy. It is with things moral and spiritual as with things physical and terrestrial : we prefer the small and constant to the brilliant and erratic ; we may admire the meteor, but we count more upon the steady all-the-year-round star.

Hence, in the fifth year of his service, Mr. Softly found himself the happy recipient of the, to him, magnificent salary of two hundred pounds a year—an income whereon he thought he might venture to keep a wife ; and so, finding the lady of his choice nothing loth, they joined hands and purses and went into housekeeping.

But in order to understand William Softly aright, we must go back a few years in his history. He was the son of very poor but very pious parents, both of whom departed this life leaving him and a younger brother, still but children, to the tender mercies of a hard, rough, and not very scrupulous world. William was barely twelve, and his brother several years younger, when this untoward event occurred ; and though they had relatives who might have cared for them if there had been money attached to them, there being none it was not considered by these relatives of much moment what became of them. Hence, many a day William found himself in the streets of the bleak northern town in which his parents lay buried, hatless and shoeless, and with that great gnawing serpent in his stomach that boys, and poor boys especially, so often experience.

His brother Jacob was of a more robust, merrier, and less careful nature, and therefore often found food and welcome where he, with his quieter and more thoughtful disposition, went hungry and cold. So it was an up-hill struggle with him ; and though by dint of perseverance he in time got into respectable employment, and managed even to secure some kind of education, it was only after suffering almost incredible hardship and privation.

Still, not all that he had gone through had sufficed to take the “Old Adam” out of him, as his pious relatives put it, and at the age of twenty-four he was a spirited, somewhat daring, and decidedly pleasure-loving young fellow, ever ready, when opportunity offered, for some frolicsome adventure. Thus it happened that one Sunday afternoon he and another young man of about his own age, elected to hire a boat and go on the river. The result was unfortunate ; his companion lost an oar, and while they were floundering about in the dusk to recover it, their boat was struck amidships by a passing steamer and well-nigh cut in twain. The future Mayor of Hyde-

borough was picked up half drowned and with a bad dent on his head, and it was some time before he was able to tell his story of the mishap. His companion never told his story.

When William Softly rose from his bed, he was a changed man, destined henceforth to live a new life. The situation he had held was filled up, and he was for some time out of work. Chance, however, threw him in the way of a traveller for the firm of Blagg and Carruthers, and this gentleman, for a small service the young man rendered him, used his influence to get him appointed as a clerk in the same house ; in which, as we have seen, he thrived. But, despite his success, his life remained the same ; the consciousness of having once been "plucked like a brand from the burning" making him ever afterwards doubly careful not to relapse into sin, and causing him to live as one on the brink of a precipice whom one false step, caused by the heedlessness of passion, or the vertigo of pride, might hurl to instant destruction.

The successful manufacturer was now in his fifty-ninth year. He had for some time past been a member of the Town Council ; but he was so colourless a politician, or so moderate a partisan, that he would have stood but a sorry chance of ever occupying the mayoral chair in a borough where political bias was imported into everything, had it not been that Liberals and Conservatives alike found themselves, after the November elections, so equally divided that neither of them could elect the man they desired, and so were obliged to unite upon one who, it was thought on the one hand, being less partial would be the more honest, and on the other, that being more honest he would be the less partial.

To the ordinary, unprejudiced mind, such a trait would have appeared one of the highest of attributes ; but it was far otherwise with the burgesses of Hydeborough, and especially with those who formed the Town Council. To them a fair and impartial mind might be an admirable thing in an abstract way, or in a story-book, but they found such a quality very inconvenient, not to say reprehensible, in a politician. Hence, though the Mayor was accorded that outward respect due to his position and to the goodness of his heart, his colleagues of the council-chamber agreed to a man in regarding him as a sort of convenient stop-gap to be got rid of at any cost when the next election should come round, and to be replaced by someone more sturdy as a partisan, if less reputable as a man.

Mr. Softly knew nothing of this determination, or if he did, it gave him no concern. He did the honours of the position with modesty and unostentation. He gave the usual number of dinners, luncheons, and "feeds" of one kind or another necessary to make the councillors and their friends feel that they were not neglecting the public good ; dispensed more than the usual charities, and was unremitting in his attention to the thousand-and-one duties that, with or without reason, are put upon the mayor for the time being.

The only item he intermitted in the wonted mayoral programme was the annual ball, and this his worship felt he could not give

without doing violence to his conscience ; for though a Churchman, he was still true to those strictly Puritan principles in which he had been brought up. It was a reproach often made against him by some of his town-folk, that when he began to be rich he left the humble Methodist connexion with which he had identified himself in matters of worship since his advent in Hydeborough for the more fashionable "Establishment." What was the real cause of his desertion of the Methodists it would, perhaps, be hard to say ; but those who were in the penetralia of these affairs, averred that it was not disassociated with the intrigue of a certain young lady afterwards to become Mrs. Softly. It was asserted, in brief, that Miss Jane Mabby persuaded him to go over to the Church out of jealousy of her cousin, Lucy Pennyfold, who she thought was casting longing eyes upon him, and who she was afraid might, with her superior education, and some advantages in person, captivate the young man that she had reason to believe, from certain signs and premonitions, was predestined for herself. Certain it is that the cousins, formerly fast friends, were never afterwards on passable terms ; although Miss Pennyfold subsequently married a very estimable man, and had no reason to regret the loss of William Softly, if she ever had a hankering that way. But it is not to be supposed that this was the cause of the estrangement of the cousins ; it is rather to be inferred that it arose from the fact that Miss Pennyfold, or Mrs. Drupe, as she was later, looked upon her cousin's going over to the Church as flat backsliding ; and no doubt the leading astray of a young man along with her constituted a grave aggravation of the original offence in the mind of so earnest a young woman as Miss Pennyfold was.

However, Mrs. Drupe had the satisfaction—if satisfaction it could be to so pious a mind—to know that Jane was punished in that she was not blessed with children, while she herself rejoiced in the possession of a son who was a stay and a comfort to her amid the many troubles that afterwards came upon her. But there was nothing to show that Mrs. Softly regarded her childlessness as a misfortune ; but, on the contrary, much to prove that she considered it a blessing. The probability is that the maternal instinct was only a secondary feeling in her ; for although she, to gratify her husband, consented to the adoption of his niece, and exhibited exemplary kindness and patience to her bringing up, yet she never appeared to bind the girl to her in those implicit bands of love which are so beautiful between parent and child.

Mrs. Softly was one of those women, not very common, in whom the emotions are so subordinate in influence that they rarely find any difficulty in keeping them under the control of a clear intellect united with strong moral principles. She was a prim, Quaker-like little body, very precise, very quiet, pious, like her husband, and with an abundance of common sense, but of little or no education, of which, however, she probably never greatly felt the lack : what is more, she never allowed others to feel the lack—a trait, by the way, which is the next best thing to a liberal education. It need hardly

be added that she was a clever housekeeper, and as much as her husband spent in his charities so much did she save by her careful management.

Letitia, the being thus brought under her charge, was the daughter of the Mayor's only brother Jacob, deserted by that worthy when she was but three years old, and finally relinquished to William by her mother when the latter decided to marry again, after six years of distasteful widowhood. Like many in her position, Martha Softly argued that if her husband was not dead he ought to be, and acting upon this view, with the hope that he would never again turn up to trouble her peace, she resolved not to throw away a good chance of a new companion for her lonely bed, and so got Holy Church to sanction fresh nuptials.

The good woman had too ill an opinion of Jacob to believe in her heart that he would be so considerate as to die and be out of her way, although she did think that fear or indifference might prevent him ever again returning to bother her.

In truth, Jacob Softly had proved so indifferent a husband to her that she was fully justified in her bad opinion of him. From the day of their marriage to the time when he left her to support alone herself and their joint offspring, he had abused and ill-treated her. This, of course, is the natural case of woman, and too much need not be made of it; nor probably would Martha have greatly complained had Jacob but worked for her and supported her somewhat in the ordinary way. But from the first he had taken the opposite course; he had made her work for him, and had drank the proceeds; often making her go hungry and much too nearly naked for comfort, and caring little for her condition so long as he got bread and brandy. Where Jacob was no one knew, and few cared, except it were his brother William, who, from the day when they had last met to the present time, had never ceased to petition for him in his prayers.

When Letitia became one of the household of Acacia Villa, she was possessed of almost as many vices as could be contained in a human soul of six; for poverty, ill-usage, and neglect had made a gutterling of her; and it took several years of the most constant and devoted care on the part of her aunt and uncle to lick her into anything like maidenly shape and behaviour. But in due course love and patience had their reward; for as she blossomed into womanhood Letitia's heart became a perfect treasure-house of all the womanly virtues. She had her faults naturally; what woman has not? but they were for the most part pretty, lovable faults; not at all to be compared with those greivous failings of mankind—and especially of womankind—at large, the fruitful source of so many ills and sorrows.

So at least thought Pennyfold Drupe, one of Letita's lovers; for, as was becoming to a young and beautiful girl, William Softly's niece had many admirers. Some, of course, admired at a distance; they would not have dared approach without uncovering their heads, and, Mahomedan-like, their feet also, so holy did the ground appear

whereon she trod ; so holy the ground whereon treads all beauty and grace enshrined in Eve-like form !

May my feeble pen essay to limn thy fair features, sweet Letitia ? No ! To do that one must hire the brush and palette of an Etty or a Reynolds, and borrow Nature's own tincts : a field of waving grain for thy hair ; the azure of heaven for thine eyes ; and the peach and apricot for thy complexion ; while as for thy lips, they can be only likened to two rosebuds newly born, and the rare, pearly treasures between them to a flock of sheep coming home from the washing, as King Solomon has likened another woman's white wonder of teeth ; and he ought to have been a judge.

Up to the year of her uncle's mayoralty, Letitia had seen but little company. The life at Acacia Villa was of a quiet, homely kind. It saw no great routs or balls, and but few parties ; and such as she did see were composed chiefly of demure and sedate religious folks. The family's visitings, too, were confined for the most among the same people. Thus, Letitia had not been afforded the opportunity of making many acquaintances among marriageable young men, and the few flirtations she had been able to indulge in had not been of an exhilarating nature.

Although a perfectly modest young lady, and by no means forward for her age, Miss Letitia Softly was a true Eve's daughter ; and while becomingly mindful of the precepts of Holy Scripture, and of the ministers of its truths under whom she had sat constantly from her youth up, she was prompted alike by curiosity and the native impulses of the heart to wish to put her feeling and her beauty to the test ; and she had frequently sighed as month after month passed by and found her still "fancy free," wondering if the predestined lover would never put in an appearance ; imagining sometimes, in her inexperience, that such a thing could never before have been heard of as a young lady reaching her age without having had one single love affair—a thing a maiden may certainly do without overstepping the bounds of maidenly modesty.

All such thoughts, however, Letitia kept locked within her own bosom, or only confided them by fragments to her most intimate friend and companion, Maria Goosey, who was engaged, and was going to be married one of these days, when her "young man" was in a position to support a wife. These confidences invariably began by her asking Maria if she did not think that she—Letitia—was getting "awfully old" ; for it must be confessed she was in the habit of using this atrocious vulgarism. Letitia had also once or twice put it seriously to Miss Goosey, whether she did not think that there were very few really nice young men in Hydeborough ; in reply whereto Miss Goosey confessed that she was of that way of thinking ; adding that she often said to her mamma that her John Henry hardly seemed like a Hydeborough young man, he was so different somehow from the ordinary run of Hydeborough young gentlemen.

Such was Letitia's state of mind when an event occurred that changed the tenour of her thoughts, and, indeed, had its effect upon

the whole subsequent course of her life. One night, her maid informed her, with much mystery, as she was undressing her for bed, that she had a great secret to impart to her.

"What is it?" asked the young lady, with a yawn. She knew Mary's weakness for secrets.

"I hope you won't be angry with me, Miss," replied the maid, deprecatingly.

"Why should I be angry?" said Letitia.

"Because it is something very serious, and it concerns you," was the answer.

"What is it? Tell me at once!" cried the young lady, her sleepiness gone in a trice.

Whereupon, Mary told her, with many excuses for her behaviour, that she had overheard her master and mistress hold a conversation about herself and Mr. Drupe, the import of which was that her cousin was more than suspected of having indiscreetly fallen in love with her; that his passion must be discouraged by every possible means, and that Letitia must not be allowed to become cognisant of the terrible fact.

"Did you listen while they said all that?" exclaimed Letitia, when the narrative was finished.

"I could not help it, Miss," pleaded Mary; "I could not get away; besides, I did think you would be pleased to hear what so nearly concerned yourself—leastways, not angry."

"I'm not exactly angry, Mary," replied Letitia; "but I think it was very indiscreet of you."

"I'm very sorry, Miss; but I thought it was a thing you ought to know."

"But it puts me in a very awkward predicament," complained the young lady; "I hardly know what to do. And aunt said she knew he loved me, did she? What were her exact words?"

"She said as how she was positive, from his way of watching you, his brightening up when you was near, and his downcast looks when you was out of sight, and his sighings and goings on, that he was deeply in love with you."

"How dare he!" exclaimed Letitia, with heightened colour; then added to herself, "poor dear boy!"

"What else did they say?" continued Letitia, after a pause.

"They said as how Pennyfold was not in a position to marry, and would not be likely to be for years," replied Mary.

"Who said so?"

"I don't know; but I think it was your aunt."

"What a shame!"

"Isn't it?" the maid chimed in.

The conversation was continued to a late hour, mistress requiring maid to tell her over and over again every word of the surprised *tête-à-tête*; and when at length Mary was dismissed, it was with the injunction never to commit such a fault as to listen again.

It was still some time before the young lady sought her pillow.

She sat before her mirror, now admiring the rich tresses that fell upon her fair shoulders like barley upon a threshing floor, and now sinking back in her chair in deep thought. Now, smiles rippled about her lovely mouth and lighted up the azure of her eyes; anon, they were replaced by a look from which the promise of tears was not far distant. She was turning over in her mind the new thing that had come to her, and tasting what it was like. For she did not doubt, from surprised glances of Pennyfold's, that her aunt was right, and that at last she was possessed of a young man's love.

When she finally laid her head upon her pillow, it was with a musical little laugh and the words: "Ah, loved! and by Pennyfold! Poor boy!"

CHAPTER II.

PENNYFOLD DRUPE.

"Poor boy!"

Such was the light in which Letitia regarded her Cousin Pennyfold, although he was four years her senior, having just completed his twenty-third year. But a provincial youth of three-and-twenty is a mere boy in comparison with a young lady of nineteen, that is, so far as *savoir faire* and mother wit are concerned; and Pennyfold Drupe was no exception to the rule. He had lived all his life in Hydeborough, and, although a man in years, he was almost as innocent and as inoffensive as a child. That he was so he owed in part to the anxious care of a fond mother, of whom he was the only child; and to whom he was devotedly attached, and in part to a poetic temperament, which disposed him to reading and study rather than to the companionship of young men of his own age, albeit by no means a recluse. It had been his mother's aim to bring him up into manhood perfectly uncontaminated of the world, and endowed with pure tastes and high principles, in order that he might, when left to his own guidance, be able to steer clear of the "pitfalls and quicksands of life." This was a favourite phrase of Mrs. Drupe's, and was often rounded into the ears of the beloved youth, who listened to his mother's admonitions as though they comprised the wisdom of all the ancients.

And in truth Mrs. Drupe was a rare woman. Endowed with intelligence beyond the ordinary run of her sex, and possessed of a fair education, she had at a ripe age married a man of great parts but little learning—a genius, in fact; one who had tried hard to effect something, but, handicapped by his lack of early training and opportunity, had failed and failed again, and finally died before his time, a disappointed and embittered man. His widow, sole possessor of the secret of his innate greatness, revered his memory, and made it her unique duty to watch the budding promise of their son, and to study how to aid the development of his powers to the best advantage, determined, if he should prove to possess exceptional gifts, that they should not wither for lack of the attention his father had lacked.

Providence had curiously lent its aid to this design; for, while still a comparatively young woman, Mrs. Drupe had suffered a partial paralysis, which left her crippled for life. Being able to get about only by the aid of a crutch and stick, she spent most of her time in her easy chair, occupied chiefly with her needle, and rarely getting beyond the bounds of the garden that surrounded her cottage. All her thoughts, therefore, all her plans, all her desires, were for her son. She read in order that he might be instructed and amused; she invited company that he might be entertained and edified; for his improvement was never out of her thoughts; and to the extent of her small strength she watched and tended the garden in order that his heart might be gladdened and his soul rejoiced by the sight of it. No vagrant weed was allowed there, and relentless war was waged upon grubs, slugs, and all such cattle. For the garden, be it known, was Pennyfold's special domain; it was his Eden, his Hesperides, his garden of Aminta; and all the time that could be spared from more serious employments was spent there; the young man being an adorer of flowers and a skilled botanist to boot. The ground at his disposal was barely an acre, but he had done marvels with it.

Pennyfold's bent was to science, and he had made considerable proficiency in several departments, notably in chemistry; and when his mother's means of educating him had come to an end, and it was necessary to think of a profession, the young man elected to become a manufacturing chemist. But as no opening of the kind presented itself in Hydeborough, and as an opportunity of becoming a dispensing chemist did, he decided to accept that alternative in preference to going farther afield and leaving his mother alone. His master dying about the time he completed his apprenticeship, and the widow making an offer of the business on advantageous terms to himself and Mr. Marshall, who had been chief assistant in the shop for several years, they purchased it; and Pennyfold was now junior partner in the firm of Marshall and Drupe, dispensing chemists, of the Corn Market, Hydeborough. His was a two-fifths share; the purchase-money of which had been advanced on easy terms by his Uncle Softly.

Altogether, Pennyfold Drupe was in a fairly prosperous position, and was looked upon by his fellow-townsmen as likely to rise. Most assiduous and unremitting in his attention to business, he might be seen betimes every morning, winter and summer, trudging with a light, elastic step from Scaleby, an inconsiderable village crowning a low escarped hill overlooking Hydeborough on the south, where his mother resided, to his place of business.

In appearance Pennyfold was not what would be called a handsome young man, though it was generally conceded that he was more than passably good-looking. In figure he was about the medium height, rather sparely built, with a face that would have been called effeminate but for a square and rather massive brow. Perhaps the reason was that it had a happy, boyish look, and that a frank, generous nature looked out of his brown, rather prominent eyes.

His nose, too, expressed culture rather than strength, and his mouth indicated an emotional rather than a strongly concentrated nature. His complexion was of a golden brown ; a hue acquired by exposure to all weathers ; for he was no fireside botanist, but one who loved the study because it took him out-doors and confronted him with nature in all her aspects. For miles and miles round there was not a heath or a bit of woodland that he had not explored, until he knew them almost as intimately as his own garden—knew so well that he could instantly detect the footsteps of the insatiable collector, to whom nothing in nature is admirable until it is made a specimen of and pinned into some *hortus siccus*.

We are dealing now with a time a little anterior to the opening of our story, and while the young chemist was as yet “fancy free”—a happy boy despite his years ; full of his garden, his studies, and his business, and troubled by nothing in the whole world besides. Being closely related to the Softly's, Drupe had, ever since his youth, been a constant visitor at his uncle's house, and may be said to have grown up in almost constant companionship with Letitia. But it was only since Mr. Softly's election to the civic chair that he had discovered how much his destiny was bound up with hers, and that the cares incident to the troublous passion had begun to cloud his brow, as seen by Mrs. Softly.

The dignity forced upon Mr. Softly had opened the door of Acacia Villa to a constant succession of visitors, many of whom saw Letitia for the first time, and consequently sounded her praises with all the more fervour because the discovery was so unexpected. Pennyfold had more than once heard these praises trumpeted abroad, and was pleased ; but it was one day in the early spring when he had been out for a ramble, and was returning with a nose-gay of the pretty myosotis, and so returning met his cousin, that the flame suddenly smote him. Letitia admired the flowers ; Pennyfold gave them to her, and as she raised them to her lips to smell their freshness, the thought arose in his mind, and shaped itself unuttered on his tongue : “Oh, how beautiful my Cousin Letitia is !” And all that day, and the next, and the next, he found himself at all times, and in all places, repeating with a quiet delight, as though there was bliss enough in the discovery itself : “Oh, how beautiful my Cousin Letitia is !” Then followed the heats and the chills, the bright gleams of joy, and the passing glooms of despair, that tell the course of the fever, and betray to eyes like those of Mrs. Softly, what the disease is that plays such havoc in the veins, and with the heart and head.

Several weeks passed, and the month of May was near its close, when the goddess of Chance threw at Pennyfold's feet the golden apple which, the more he had desired it, the farther it seemed to flee away, like the golden key that, it is fabled, marks the spot where the rainbow touches the earth. He had occasion to call at Acacia Villa one evening on his way home ; his aunt had entrusted him with some small commission, and he wished to see her. Mrs. Softly

was not at home, however ; so he left a message, and was passing out through the garden when he met Letitia. She had been walking, and her colour was heightened by the exercise ; she wore a hat with a broad brim, the under-side of which was lined with some straw-coloured material ; and being pushed back from her forehead in consequence of the heat, it had the appearance of a pale golden aureole about her face.

Pennyfold had been walking with eyes downcast, and did not see her until they were but a few paces apart. On beholding her his heart made a bound, and the thought that had been in his mind ever since the moment he was stricken with love for her, again shaped itself into words that almost escaped his lips : “ Oh, how beautiful my Cousin Letitia is ! ” But she looked so passing beautiful at this moment, and he was so profoundly moved, that his gaze rested upon her with a kind of awe ; hence, he did not readily find his tongue, and the young lady spoke first.

Letitia had marked him as she entered the gate, where she had bade adieu to Miss Goosey, and noted his paleness, and a certain languor in his movements and in his expression that was quite foreign to his ordinary manner. Since the indiscreet discovery of his secret by her maid, Letitia had set herself to note his behaviour, and although he had not, to her chagrin, come to the house as often as formerly, she thought she observed some of the signs that her aunt assigned as love-tokens ; yet it was not until now that she noticed what a deep shade of sadness had wrought itself into his countenance. And no sooner did she note it than she thought : “ Poor Pennyfold ! if it is for me ! ” and then with the pity came love, or something so akin to it that it deceived her as it had deceived many before her.

“ Good evening, Cousin,” said Letitia, when he looked up. “ You seemed so deep in thought and so solemn, that I was half in the mind to step behind the lilac for fear of disturbing you. A penny for your thoughts ! ”

“ I was thinking,” said Pennyfold, hesitatingly—“ I was thinking how very beautiful you look in that hat ; ” and the young man reddened at his own temerity.

A pretty blush suffused Letitia’s temples ; and she stammered, looking on the ground the while : “ Were you ? I am glad you like my hat, but I don’t think that was your thought, because your eyes were on the ground.”

“ What I was thinking of before I saw you I don’t know,” replied Pennyfold, in some confusion ; “ but no doubt it was about you ; lately I have been able to think of nothing but you.”

“ Is not that rather foolish ? ” replied Letitia, with a forced little laugh, turning her look from the youth’s pale face and glowing eyes, that told only too plainly how much his words meant.

“ If it be foolish to love, yes,” stammered Pennyfold, with downcast eyes.

“ You must not say so ; it is best not,” faltered the girl, as pale as he.

Pennyfold stammered something further.

“Pray do not,” implored Letitia; “I must not listen, I must not indeed! Good-bye!” and with these words she fled, but in doing so she turned her eyes upon him with a look of inexpressible pity and delight.

CHAPTER III.

THE RUIN.

Pennyfold Drupe left the grounds of Acacia Villa feeling like a stricken dog—nay, feeling as stricken dog never did feel—crushed with the suddenness of the blow that seemed to annihilate hope and leave him nothing but despair. He felt as though, like a wounded cub, there was nothing for it but to creep into a corner unseen, and moan and die, as so many had done before him. It is ever so in youth; all deep emotion is so vivid that, like lightning, it destroys all perspective.

A few paces beyond Acacia Villa, he turned into a path which, descending through meadows and cornfields, leads to the height upon which Scaleby is perched. This was the way that, in passably good weather, Drupe generally took to go home, partly because it led him by his uncle's gate, and partly because it took him by his beloved fields, although from the Cow Market it was the longer way. He now took the field path for its very loneliness: he wished to hide himself from every human eye and have his hour of grief unseen.

To-day, for the first time in his life perhaps, Pennyfold noted none of the beauties of the scene; neither the waving grasses ready for the scythe, the blooming hedgerows, the birds that trilled on every branch and spray their evensong to the setting sun; the glowing river, and the ivy mantled ruin mirrored in the flood; nor the cottage on the hill beyond, with its fiery windows and snowy gable, where he knew his mother would be watching for his coming. He trod on and on, his eyes blinded with tears, insensible to everything but the dull gnawing pain in his heart. When he reached the foot-bridge, an old-fashioned wooden structure that here crossed the stream, said to have been built in the first instance by the monks who inhabited the neighbouring priory, he hesitated a moment, fancying he heard footsteps on the path beyond, then turned and hid himself amid the ruins.

The impression of having heard footsteps was no imagination, but they were behind him, not in front. They were the footsteps of Letitia, who was following him in breathless haste. After running from him in the garden, the young lady did not stop till she had gained her own room. There, breathless with hurry and excitement, she paused to think over what had happened. But it was impossible to think the matter over calmly; her blood was in a whirl, and the one idea that took possession of her mind, excluding all others, was that she had hurt the youth that loved her. Then, as before, she

exclaimed, "Poor boy!" while tears filled her eyes and ran down her cheeks. The next moment she was drying her wet lids, and looking stealthily out of the window to see if he had gone. She saw him descending the first field, his head on his breast, the picture of despair.

"I must comfort him!" she cried, and without a second thought except to give a peep in the glass to see if her hat was as it should be, she tripped downstairs as quickly as she had mounted, and was soon pursuing her unhappy cousin down Scaleby fields, as they were called.

Letitia was only a few steps behind him, but hidden by a turn in the path, when he took refuge in the ruin. The old monastic pile stood a little aside from the path, and was almost hidden from view by a grove of trees and a thick undergrowth of hawthorn and elder. On making her way through the bushes, and gaining the entrance, Letitia saw her cousin sitting upon a fallen column with his face buried in his hands. She hesitated just a moment in the doorway, and then ran lightly to his side, and there stood, trembling from head to foot.

Pennyfold was so utterly insensible to everything but his own grief that he was not aware of her presence until she gently called him by name.

"Letitia!" he exclaimed, half dazed, showing, as he raised his head, a pale agonized countenance and eyes wet with tears.

"I came after you," she explained, endeavouring to master the agitation that increased at the sight of his grief—"I came after you to ask you not to take too much to heart what I said; I did not mean to give you pain, and I did not think you would take it so hard. Please forgive me!"

Pennyfold, for answer, took the hand held out to him, and bowing his head over it, shook with a succession of sobs.

"Do be calm, Pennyfold," pleaded the young lady, vainly trying to restrain her own tears.

But it was not easy for Pennyfold to recover calmness. You see, he was a soft-hearted young man, and the tears would not be stayed for some minutes. When at length he was able to look with dry eyes into the watchet orbs of his cousin, they had been dried with her handkerchief; which treasure, lent for the purpose, he carried away with him, and hoarded as the apple of his eye for many a long day afterwards.

But why dwell longer upon the scene? It was the old, old story. Letitia, full of pity, had followed him to comfort him, as she had known so well how to do when in their girl and boyhood days he had suffered some discouragement; but in fewer minutes than it takes to write these lines, she had plighted her troth to him, and they left the ancient building, once more consecrated to the ministry of love, hand in hand, with smiles on their lips, and a bright radiance in their eyes.

Oh, how lightly they tripped back to the gate of Acacia Villa, and

with what lingering fondness they bade each other adieu ! And when once more Pennyfold turned into the field-path on his way home, with what different emotions was he swayed ! So light was his heart, and so bright the world before him, that he seemed to walk on air.

And so ended the first act of the long comedy-tragedy of their young loves.

(To be continued.)

II.—UNCLE ABRAHAM'S TALKS.

MEMORY.

SOME days afterwards Uncle Abraham and I had a further talk about the "Learned Watchman," as we called him. My curiosity had been greatly excited respecting him, and I made some remark as to what I considered his prodigious memory. Uncle Abraham said he did not consider his memory as anything specially out of the ordinary. "Memory," he added, "was a prodigious thing—any one's memory, even that of persons who complained that they had no memory at all." The only thing extraordinary about the Watchman's memory was, that he had learned how to make the best use of it. "Just imagine," he said, "what a deal of stuff people commonly take the trouble to remember ;—other people's business instead of their own, trivial circumstances of every day life, what they eat and drink, their petty crosses and vexations, numberless superstitions and half-superstitions, as, that it is unlucky to go under a ladder, or to spill the salt ; and a thousand other absurdities that were better forgotten. Add thereto the necessary and minute details of their business, the events of their life, from earliest childhood upwards, and the myriads of circumstances of time and place and relation that go to make up our daily existence, and you may begin to imagine what a marvellous thing is memory, even in the least instructed. What, then, may it not be when cultivated. But with the majority of people the wise precepts they learn, the good advice they get, and the experiences of others that might profit them, go in by the ear or the eye, but leave no more impression than the passing wing of a swallow upon the water. The memory, like the hands, and the tongue, and the other members, is a willing servant, and will do what we bid it do. If we use it to doing good, honest, yeoman's service, it will continue to do it ; but if we let it fall into a careless, slipshod way, it will be difficult, and may be impossible, to break it of the habit. Read the seventy-second and the seventy-fourth *Idler* : there you will see some observations on the memory that every young man who wishes to form his mind and his character would do well to take carefully to heart."

When I returned home I at once turned to the *Idler*, and I here transcribe some sentences of what I found written. The following is from No. LXXII :—

“Forgetfulness is necessary to remembrance. Ideas are retained by renovation of that impression which time is always wearing away, and which new images are striving to obliterate. If useless thoughts could be expelled from the mind, all the valuable parts of our knowledge would more frequently recur, and every recurrence would reinstate them in their former place.

“It is impossible to consider, without some regret, how much might have been learned, or how much might have been invented, by a rational and vigorous application of time uselessly or painfully passed in the revocation of events, which have left neither good nor evil behind them; in grief for misfortunes, either repaired or irreparable, in resentment of injuries known only to ourselves, of which death has put the authors beyond our power.”

This is from *Idler* No. LXXIV:—

“It is evident that when the power of retention is weak, all the attempts at eminence of knowledge must be vain; and as few are willing to be doomed to perpetual ignorance, I may, perhaps, afford consolation to some that have fallen too easily with despondence, by observing that such weakness is, in my opinion, very rare, and that few have reason to complain of Nature as unkindly sparing of the gift of memory.

“In the common business of life we find the memory of one like that of another, and honestly impute omissions not to involuntary forgetfulness, but culpable inattention; but in literary inquiries failure is imputed rather to want of memory than to diligence.

* * * * *

“The true art of memory is that of attention.”

ABOUT READING NOVELS.

I shall have something more to say about the Learned “Watchman” later on; but here I wish to insert a few more notes about reading, as they will fit in very well with what has gone before. I once asked Uncle Abraham to name some books that he would specially recommend a young man to read. He replied: “Any book that is not written with a bad or frivolous intention. Apart from such books, you can hardly light on anything but will tend to enlarge the mind and cultivate the spirit. But when I speak of books I mean real books; for, as Charles Lamb says, ‘there are books and books’”

I would quote Lamb’s remarks but that he is one who has to be read, not in citations, but as a whole, as you admire pictures.

“What about novels?” I then asked.

“As a rule,” answered my Mentor, “I would not advise either young men or women to read too many novels; since the habit of inattention such reading, carried to excess, is likely to beget, is liable to incapacitate the mind for deeper reading. But occasional fiction is good, especially by way of relaxation for those who give much time to deeper studies. To say that novels are all lies, and therefore bad, as I have often heard people assert they are, is to say a foolish thing. A well-written novel is full of human nature, and as

such may teach lessons that can hardly be taught anywhere else so effectively. The theatre is the only thing that comes near it in this respect; and we can't all go to the theatre: nor would it be well if we could. There are some novels that every one ought to read, and if they are not curmudgeons they will be the better for doing so."

"Will you name some?" I asked.

"Yes: 'The Vicar of Wakefield' is, of course, one. Then there is 'Jane Eyre,' by Charlotte Bronte; and with it should be read the biography of that talented writer, by Mrs. Gaskell, which is as fascinating as a novel. Then there are 'The Old Curiosity Shop,' by Dickens; 'Henry Esmond,' by Thackeray; 'John Halifax Gentleman,' by Mrs. Muloch-Craig; and 'The Mill on the Floss,' by George Eliot—all good novels. 'Adam Bede,' by the latter author, is equally good; full of pithy sayings and lessons for every-day life. The late Prince Consort is said to have never wearied of having it read aloud, and declared it to be the best novel then extant. I know no class of literature so well calculated to stir up generous impulses and correct the natural selfishness of the heart as a well-written novel."

Uncle Abraham used to say that selfishness was the sin of sins, because it was at the bottom of all wrong-doing. I have another note on selfishness which will come in very well here. It is as follows:—

"SELFISHNESS DOES NOT PAY.

"Undue selfishness is not only morally wrong, but, like dishonesty, it is bad policy. It does not pay to be selfish. If you show too greedy a disposition; if you are for ever grasping, getting, and keeping for your own use; never thinking of others, except to turn them to account for your own advantage, be sure the time will come when men will avoid you all they can, both in business and socially. They will say: that man is all for himself; he grasps all he can and gives nothing. And it is with intellectual and moral things as it is with material things; the man who hoards up the one hoards up the other; he who gives nothing in a material sense, has nothing to communicate intellectually or morally. And, being afraid lest he should give anything without getting an adequate return, he does not give due scope to his powers, and so allows them to stagnate. This is one of Nature's methods of avenging herself.

"But too generous a disposition is almost as bad as a too selfish one. The man who gives too much, be it out of pure thoughtlessness, or from the desire to be well thought of, is liable not only to injure himself, but those that are dependent upon him. One must be neither too generous in money, nor in time, nor in the gifts of intellect, otherwise he will soon find himself with nothing to give, neither in one form nor another.

"So we come back to the old motto; the happy mean—moderation in all things."

WISDOM is but the abstract of the past; beauty is the promise of the future.—*O. W. Holmes.*

Children's Corner.

A FAIRY TALE OF SCIENCE.

By A. M. SOMERVILLE.

I AM a very curious man, and also a very clever one, for I can do what no man else has ever done; that is, understand the language of animals, and what we call "lifeless things." It has taken me many years of toil and thought to learn this; hence, I am very old. A few weeks ago, being unwell, I bought a bottle of magnesia, and as soon as I had opened it I heard a tiny, unpounded piece of magnesia speak thus: "So you want me to talk to you and give you some information about things I have seen? Well, suppose I tell you my history; I know you would like it."

Being exceedingly curious, I listened, and heard the following:—
"The first thing I distinctly remember was being shut up in a great chalk rock many, many feet high. There were many other cliffs near this one, and between mine and another ran a small river. Here I stayed for a great space of time, but by degrees I got washed away and borne down by the river, and then my happy days began. For as this river flowed on it washed away the cliffs, grain by grain, and that is how I came to be borne away. But my joy did not last long, for I was soon carried to the sea, where, after roaming and floating about a bit with some grains of salt and other minerals, I sunk. I remained many years at the bottom of the sea, playing with the sand, until that land was, as men call it, reclaimed; that is, the sea washed backed and left the land dry and cultivable. It soon became fertile, and a turnip growing near me sucked me up into its blood—for vegetables have blood as well as animals. I now thought my wanderings were at an end; but not so, for before the turnip had time to wither a small hare ate it, and this time I formed part of an animal's body. He took me to some very peculiar places, from what I could judge from my present situation, but I was still quite happy. A few days after, an eagle came and took the hare to its nest, which was built in a tree on the side of a large rock. Here the poor little animal was devoured, and I with him. After a time the eagle died in its nest, and its body rotting, I was once more brought to daylight.

"Oh! how I wished I was a man or a four-footed animal, and could have jumped, for I thought I should never have got away from there again. But after all, as I thought of all my adventures, I knew I was better than a man, for he soon dies; but we, whom they contemptuously call minerals, never die. The substances of which animals are composed never die, but change form, as I observed in this case; for the eagle's bones and tissues soon turned into lime, clay, and other minerals, some of the grains only about the size of myself, which was nearer that of a pin's head than anything else I

know. After I had lain there a great time a storm arose, which, blowing down the tree, upset the nest and its contents.

"This storm happened to be an earthquake, for directly I landed on the ground it opened, and I entered into the bowels of the earth. I never saw anything so wonderful or so magnificent in all my life, although I have seen strange things. This was like the inside of an immense globe, and was full of liquid fire, burning rocks, boiling water, lava, pumice, brimstone, and other fearful things. The heat was so extreme that I nearly melted, but being so small and hardened, and other things having entered into my composition, such as a little iron, sodium, &c., I just managed to keep in a solid state. Nevertheless, I had to keep to the edge of this great saucepan of Nature's. I presently entered into conversation with a sage and learned rock, which had once formed part of the crust of the earth. I told him my adventures, and in turn he told me this very curious but very true tale, which I am sure you do not know, and you will be glad to hear, as you wanted information.

" 'Once upon a time,' he began, 'there was an infinite, unbounded place which we now call space, and in it there were many thousands of planets or worlds ; that is as far back as I know. Well, in this space there was a great ball of fire and other combustible things which were kept together by the force of cohesion. After a time it became hardened on the outside or crust (but still burning inside) like the other planets. This was because the crust of it became cold. All these planets together are now called the Solar system, from a great big stationary one in the centre called the Sola or Sun. It attracts all the other planets to it, and most of them revolve around it, among which is this one I am speaking of which is called Earth, and is nearly ninety-five millions of miles away from the sun. Some of these planets revolve around the others, and these are called secondary planets. They are all kept in this situation by what is called the force of gravitation, and if that were taken away all bodies would go flying away and never cease. After years and years of time, the earth got quite hard for miles down ; but this fire and stuff inside was very fierce and strong, and wanted to get out, so that it burst out in some parts, and formed great chimneys which are called volcanoes ; some which only eject steam and water, like a boiler tap, are called geysers. Sometimes it would shake the earth in some parts, and raise or lower the land, or open gaps which would be called an earthquake or earth-tremble. After many millions of years, some animals appeared on the earth, but unlike those we see now, for they were extremely big, and some covered with hair, and having tremendous tusks. At first, only reptiles came, such as immense crocodiles ; but soon gigantic quadrupeds (that is four-legged animals) came. All this time the earth was composed of land and water, or solid and liquid matter, and great changes were going on. Sometimes the land would sink in places, and be covered with sea, or the sea would go back and the land become fertile. For several miles round the earth there is a kind of gaseous substance called air, which

is composed of two elements, oxygen and nitrogen, and helps things to live, for without it all animals and vegetables would die. It was many millions of years before such a thing as the biped man appeared on the earth, and he was at first such a savage, uncouth, unintelligent being, that he ought not properly to be ranked with man. But after a while men became wiser, and they are now just beginning to find out a few things about the earth on which they live; but I am sorry to say most of them believe that it has only been in existence a few hundred years! Many great men have lived lately though, and show by the science of geology that that is an erroneous idea. They class all things of the earth under three heads—namely, animal, vegetable, and mineral elements—although they know it is all mineral, or rather chemical, under different forms. The vain, stupid little creatures dig down into the earth for a few hundred feet, about as much in comparison as a fly would do to an orange, or not so much, and then think they have dug to a ‘prodigious depth!’

“‘This is now up to the present time; but the world may live many millions of years yet. Perhaps we may have a wiser and superior creature to man, or maybe if the earth gets hot again it will return into molten matter, and perhaps even further than that, into nothing but steam, like gunpowder, and leave nothing behind to show where it has once been! Now, good-bye, my little friend, for I see you are off. Think of this, for I assure you it is all true!’

“I had, indeed, been carried away with a stream of molten lava, which rushing along, burst out of the furnace, and entered a narrow channel in the earth. I had barely time to bid my friend farewell ere we were ejected from a volcano, and I was glad to see daylight again, although we had plenty of light where I had just come from. We soon rushed down the mountain, and along the valley, laying waste and burning everything. At last we stopped, I don’t know why, and the lava became solid. One day, some travellers passed by, and seeing a field of lava they picked up two or three bits, and put them in their pockets. I was stuck to one piece, but being not very firmly attached, I slipped, and fell out of a hole in his pocket after he had walked a little way.

“I was now free again on the earth; but a gust of wind coming, I was blown some distance with sand and dust, to where a fine tree was growing, which took me into its blood, and so a second time I became part of a vegetable. This tree was soon cut down, and I was thrown with it into a fire. I did not, of course, burn, and I was cast away with the ashes. A hen having eaten me with some grain, I presently found myself served up at table. An old man ate the part in which I was, and soon after died, and was buried. His body decomposing, I was eaten by a root of grass. Some sheep were allowed to graze in the churchyard, for a churchyard has always the best pasture. I will tell you why, because the gases from the dead bodies enter into the grass and make it very good and rich, and being eaten by the animals, it fattens them. The sheep who ate me

was killed, and served up at table, and a second time was I eaten by a human being, a boy, thus proving the saying of a great man: 'We are doomed to eat and be eaten.' One day, this boy fell into a great fire and was burned, and I was carried away with the smoke, and fell to the earth. Finally, a man picked me up—probably a very clever one—examined me, and ascertaining what I was, placed me in this bottle, as I suppose, to be eaten."

Friends, I did not eat it, but put it away, and have it yet.

Book Notices.

Poverty. By JAMES PLATT. (London: Simpkin, Marshall, & Co.)

It is impossible for us in a brief notice to discuss the many interesting questions raised in Mr. Platt's book. We take one pregnant sentence at random: "Mr. George would do good if he told the people the only remedy to extirpate poverty is self-denial." Mr. Platt adds that "they must drink and smoke less"; but if they neither drank nor smoked at all we are by no means sure that poverty would be extirpated, although no doubt individual comfort would be largely increased. Self-denial must include much more than this, for it is obvious that scores of thousands of workers in London alone, even though they neither drank nor smoked, do not earn enough to keep a family fully supplied with the common necessities of life. At once we are let loose upon the thorny questions of the relations of the sexes and prudential checks on population. We might take many other sentences from Mr. Platt's chapters on Socialism, Co-operation, the Dwellings of the Poor, and the Nationalisation of the Land, and show that the problems are much more complex than he appears to think. Mr. Platt is not by any means deficient in human sympathy, but like most successful men, he appears to us to make too heavy demands upon human nature. The natural effect of a period of prosperity is to increase the standard of comfort among those who share in it. No doubt prudential considerations ought to have more weight than they command, but we appeal to the experience of men of all classes who have been favoured with a long season of prosperity, whether the tendency to increase the standard of comfort is not almost irresistible? It may not be a matter of selfishness on the part of the breadwinner, but of social pressure, and of parental and marital affection. How can we expect the average workman, with a growing family, to keep, week by week, in mind the possibility of a glut in the market? The lot of the average workman is hard enough any way; if he sweetens it a little with a little luxury now and then, we cannot find it in our heart to blame him severely.

Having said this much, we are quite free to express our hearty

sympathy with the robust and manly character of Mr. Platt's writings, and we commend them to all young men who have to make their way in the world. We fully endorse one of Mr. Platt's concluding remarks, that "there is no nobler field for philanthropy than the teaching the poor how to help themselves." The world of social philanthropy is at least as wide as that of politics. Mr. Platt's "Poverty" is one of the most stimulating and suggestive essays that he has yet written.

Thomas Carlyle. A History of His Life in London: 1834-1881.

By JAMES ANTHONY FROUDE, M.A. (London: Longmans, Green & Co.)

These concluding volumes of Mr. Froude's biography of Carlyle are much more pleasant reading than his previous ones. The books by which Carlyle did so much to stimulate thought cost him almost incredible suffering. He wrote them, as he himself said, "with his heart's blood." When he was at work on the "French Revolution," it seemed to him impossible that he should ever again have so terrible a task; yet the difficulties connected with his "Cromwell" were even more formidable. For years he could not form an exact idea either of Cromwell's character or of the real tendencies of the age of the Commonwealth; and when at last he appeared to himself to have gained firm ground, he made many experiments before he found out the best way of setting forth the results of his thought and research. But of all his writings the one which caused him most wretchedness was his "Life of Frederick"—a work of which he was heartily tired long before it was finished, and which he would probably never have begun if he had foreseen the demand it was to make upon his highest energies. The gospel of silence notwithstanding, Carlyle never mastered the art of concealing his misery; and so, when he had any great work on hand, he made life almost as intolerable to everyone who came within his reach as it was to himself. Even those, however, who condemn him most vehemently for his childish outbursts of anger and spite must admit that he acted in a manner worthy of his own "Heroes" when he returned, day after day, to labours in which he found so little pleasure. There was nothing mean or sordid in the motives which impelled him to make these heavy sacrifices; for to wealth he was indifferent, and fame he regarded as a will-o'the-wisp for which it was not worth while to take the slightest trouble. Carlyle worked as he did because he believed that truths had been revealed to him which the world ought to know, and because, believing this, he recognized his responsibility to the Power in the operation of whose rigid laws in the government of the universe he had so passionate a faith. This will always make him an impressive figure; and those who realise all that it means will not find it very difficult to forgive his querulous temper, his uncharitable judgments, and his incapacity to bear with patience the smallest ills of life.

The Storm-Cloud of the Nineteenth Century. By JOHN RUSKIN.
(George Allen, Sunnyside, Orpington, Kent.)

We would advise every young man and every maiden to read Mr. Ruskin's works, or as many of them as they can get hold of; for some of them, unfortunately, are very difficult of access. No living writer is more suggestive; none more stimulating to the young in a moral and intellectual direction. The "Storm-Cloud" does not lend itself very well to quotation, and it is not, perhaps, so good a work for a beginner in Ruskin to start with; but it is, nevertheless, full of thought, and cannot but tend to awaken observation and reflection—the two things that there is so little of in these days of cheap reading and compulsory instruction.

Three Visits to America. By EMILY FAITHFULL. (Edinburgh: David Douglas.)

This is mainly a book about American women of all sorts and conditions. Miss Faithfull evidently considers that, in many respects, the English woman has reason to envy her American sister, who has certainly greater opportunities of earning her own living, and a freedom of action unknown among the middle classes of this country. We should like to see some male American attempt the converse of Miss Faithfull's task, and give us a book about English women, contrasting them with those of his own nation. Miss Faithfull not only discusses the American woman who figures in public life, but also the working women and the women of Salt Lake. One of her most interesting chapters deals with the question of divorce, which Miss Faithfull approaches from a conservative standpoint. The subject is a tempting one for discussion, but we must content ourselves with the expression of an opinion that the iron rigidity of English law is productive of almost as many evils as the reprehensible laxity of some of the American States.

The Man Wonderful in the House Beautiful. An Allegory, teaching the Principles of Physiology and Hygiene. By C. B. ALLEN, M.D., and MARY A. ALLEN, M.D. (New York: Fowler & Wells.)

This is a useful book for home reading and for teachers. It gives, in a pleasant, popular way, a great deal of information on the subjects mentioned in the title, and it could hardly be put into the hands of young people without decided benefit.

The Naturalists' World. (London: W. Swan Sonnenschein & Co., Paternoster Square.)

The volume for 1884 forms a most instructive and useful book. It is full of illustrations, and its contents include articles upon almost every natural history topic of interest. We learn that a prize is about to be offered in connection with this magazine for the best list of a dozen well-known naturalists.

Facts and Gossip.

WITH a view to encourage the study of Phrenology, Mr. Fowler has decided to offer, from time to time, a series of Prizes for essays on that subject. To begin with, Mr. Fowler offers a Prize of One Guinea for the best Essay on Phrenology by any one under eighteen years of age. The time given will be up to the 25th of March, by which date all essays intended for competition must be sent in, addressed to the Editor of the PHRENOLOGICAL MAGAZINE. Each competitor must be prepared to give, if required, a guarantee that his or her age is under the age specified. All essays should be written on one side of the paper only, and must be accompanied by the full name, address, and age of the writer. The length of essays must not exceed eight pages of the PHRENOLOGICAL MAGAZINE in length. Further particulars about this and other prizes will be given in our February number.

IN connection with the above scheme, we purpose raising a Prize Fund for the extension and development of this object, and shall be glad to hear of any friend who will join us in this worthy object.

AN Italian author, Signor M. P. Mantegazza, professor of natural history at the Museum of Florence, has just contributed a very remarkable volume to the list of scientific works. Mantegazza's work is devoted to the subject of human physiognomy and the expression of the emotions; it deals very amply with one very interesting question—whether it is possible to mask one's feelings by force of will so completely as to deceive the keenest and most experienced observer. Civilized and even uncivilized peoples, have been steadily training themselves to master all outward signs of emotion as far back as history records. The fashionable man of Paris, London, or St. Petersburg, tries to appear impassive as a god; the American, less hypocritical, aims nevertheless to cultivate something of Indian gravity and stoicism. What are the results of the long-continued effort of man to master feeling and to hide what Nature seeks to express under all circumstances? They are sometimes very wonderful; but M. Mantegazza does not believe they are ever wholly successful, notwithstanding that the capacity for self-conquest may have increased steadily through generations. Woman succeeds, indeed, better than man; and the uninitiated may be deceived by either, but the experienced physiologist can never be wholly duped by the immobility of a face or the tearlessness of an eye.

DR. RICHARDSON recently made a very interesting and amusing speech in praise of total abstinence. Some wild cleric had declared that teetotallers made up for their teetotalism by gluttony, and by way of reply Dr. Richardson calculated the cost of the household of

a family of ten persons for ten years while the persons in that household were not total abstainers. He compared that cost with the cost of the same household and for the same period after every kind of alcoholic drink had been banished that house, and he announces as the result of his investigations that, although three members of that household were children at the beginning of the first ten years, and were grown up at the close of the second ten years, the expenses for food in the abstaining was full 13 per cent. less than during the previous period. The proprietor of a large temperance hotel also calculated that in his hotel the customers consumed from 10 to 15 per cent. less value of food than others where temperance did not prevail.

THE mantle which Mr. Ruskin has so often worn in the theatre of the London Institution seems to have fallen on Archdeacon Farrar. We "pay tithes of mint and anise and cummin," said Dr. Farrar in a recent lecture there, to the three R's, but we disregard the weightier matters of "admiration, hope, and love," by which we live. Children in a City school can tell you very rapidly how much 27 lb. of bacon will cost at 9¼d. per pound, but they have never "breathed the fragrance of a lily, or so much as seen a bee." This and much else in the lecture seemed to show that Archdeacon Farrar sympathises with the denunciations of modern education which Mr. Ruskin has been launching for the hundredth time in the last number of "*Fors Clavigera*." Mr. Ruskin, one need hardly say, is all for heroic remedies, and has already done something to turn his theory into practice in the Coniston village school.

MR. JAMES COATES, Phrenologist, is doing a healthy educational work in Glasgow, by his Tuesday night lectures on "Phrenology and Hygiene," in the City Commercial Halls, 42, Argyle Street. Mr. Coates also frequently occupies some pulpit on a Sunday, when he invariably attracts large congregations. Mr. Coates declares Phrenology is the handmaid of Christianity, and his work among the churches—Presbyterian, Baptist, and Congregational—indicates that his services are appreciated, and public opinion concerning phrenology and phrenologists has undergone a radical change since he settled in Glasgow seven years ago.

PRINCE KRAPOTKIN's experiment with "Pussy," the companion of his captivity, has been repeated by M. Emile Gautier, his fellow prisoner, who during his detention at Clairvaux had studied very closely the intelligence of the cat. The results of his experiments are published in the *Revue Scientifique*. M. Gautier says: "It is literally true what Krapotkin says, that 'Pussy'—whose education, it should be mentioned, had been particularly careful—recognizes her image in a glass, distinguishes the different signs of the prison clock, plays hide-and-seek with the same seriousness and the same interest as little children, &c. It is also correct that she understands (at least

she behaves at if she understood) the significance of a few words. I am even disposed to believe that she is not indifferent to Gounod's music. But these are not the most surprising features. Among those which Krapotkin has omitted to cite there is one which has always struck me more than all others, and which I now submit to you. I ought to tell you that nature has ornamented my head with a luxurious mass of hair. Krapotkin, on the other hand, is extremely bald. This difference was used by our little companion for a singular intrigue. It has often happened when both played with her that she softly passed her paw over our respective heads as if to ascertain that her eyes did not deceive her. This inspection concluded and the visual notions confirmed by touch, her physiognomy took the air of comic surprise. The variety of sensations perplexed her, and she did not dissimulate the feeling. Nearly every evening the scene was gone through, to our great edification, as you may imagine. Another strange thing was her unaccountable fear of the warders. She had been born within the walls of the prison, and belonged to an old family of prison cats. Heredity and the influence of the same surroundings ought to have overcome this antipathy. This, however, was not the case. No sooner did she espy the abhorred uniform at the end of the dormitory or cell than she fled with every sign of terror. Even if one held her at the moment it was prudent to let her go at once, otherwise she knew how to scratch. Nothing was of any use, neither smiles nor frowns. With us, on the contrary, she allowed herself all kinds of familiarities."

WE have received a number of verses from a youthful correspondent. We print a few of them as a warning. Should this not be sufficient to make him desist, let him for the future take his effusions to the neighbouring grocer.

"O Mary, my dear,"—Adolphus he wrote,
 "I've seen you but once it is true ;
 But in those few seconds my heart it was caught
 In the net that your liquid eye threw.

"It struggles and struggles, and cannot get free ;
 Nor would it i' faith if it could ;
 So prick it, and stick it, and mark it with ' D,' *
 And think not too quickly you're wooed."

The maiden replied : " Many thanks for your heart ;
 But take it is more than I can :
 So keep it, and shield it from wandering dart,
 And sing clap-a-cake, bakery man."

"Then have you a sister ?" Adolphus replied,
 "Or have you a sister-in-law ?
 An' you have I will love her, and make her my bride :
 Nor call me a silly jackdaw."

* D is the young man's initial.

Answers to Correspondents.

[Persons sending photographs for remarks on their character under this heading must observe the following conditions :—Each photograph must be accompanied by a stamped and directed envelope, for the return of the photographs ; the photograph, or photographs (for, where possible, two should be sent, one giving a front, the other a side view), must be good and recent ; and, lastly, each application must be accompanied by a remittance (in stamps) of 1s. 9d., for three months' subscription to the MAGAZINE.—ED. P. M.]

LUTHER (Aberdare).—The photos indicate a strong character, although not especially witty, showy, or brilliant in manner ; has some contradictory points of character, owing to some strong and some weak developments. She is obliging, tender-hearted, and has the happiness of others at stake as well as her own. She is particularly serviceable amongst the sick and needy ; will generally be respectful. She has a full share of energy and endurance. What temper she has is not of a boisterous kind, but it renders her reticent. She is too confiding, and liable to overdo, and she allows the strongest faculties to monopolise. She has not an undue desire to please, but will mind her own business, pursue a straightforward course, and be quite like herself. Is domestic, and when married will prefer to stay at home, and centre as much enjoyment in home as possible.

J. C. (Paris).—You are rather too highly organised, too intense in thought and feeling ; your mind acts more quickly than other people's ; hence you are liable to be too quick in speech, and to come to results at once. You have not much of the plodding disposition. You are a great lover of facts ; hence your conclusions are very definite and distinct. You are quick to gather knowledge from external sources, and you use the knowledge you possess to good advantage, but are not characterised so much for original thinking or for plodding investigation. You must take more time to live and enjoy yourself ; you are getting through the world too quickly. You have a talent for music and art, and might succeed in either, especially the former. Try to balance and harmonise your powers as much as possible. Your temper is rather strong, and you have none too much restraining power.

T. H. B. (Macclesfield).—This gentleman has an elevated brain, which favours a high-toned mind. He is not coarse, nor low, nor animal, nor very depraved. He is adapted to some position requiring scholarship and moral discrimination. The young lady is powerful, strong, executive, and forcible ; she must have come from a powerful, long-lived family, and is equal to any amount of endurance. It will be difficult for her to submit to discipline, or to be governed by another ; but she may be guided through her affections and influence of a proper kind, and if happily situated, she will make

a splendid woman in many respects. She has all the qualities to excel as a mother. Her feelings are all strong, and if not properly guided, they will manifest themselves in an unpleasant way. She has great perseverance, and can go through the severest trials without breaking down. The contrast between the constitutional power of herself and the gentleman is very great, giving her greatly the ascendancy. She must either be very carefully guided, or else allowed to have her own way.

J. D. (Brighton).—This lady is highly organised, and possesses much intensity of feeling. Little causes act powerfully on her mind. She is capable of high culture and great enjoyment. She appears to have a well-balanced head, and her organization is more complete in her consciousness than many. Is alive to all going on around her. When necessary, she has an ample amount of energy and pluck to go through the trials of life. She has great power of expression, and should be a good conversationalist, and as a musician throws her whole voice and spirit into her music. She is bland in her manners, has favourable power to organize and systematize her studies, habits, and thoughts. If she lives up to her organization, she is capable of accomplishing more than most ladies. Is ardent and devoted in her love of nature, and could be killed by neglect, but she never gets too much attention.

E. F. (Cheshire).—Is exquisitely and delicately organised. His brain power is rather too great for his body. He is not adapted to hard work of the body, but he can do considerable brain-work. He needs to be careful not to overdo his study, for he could easily do so. His gifts are intellectual and moral; his powers are of the elevated type. He will take no pleasure in the low and coarse, and is far removed from the inclination to be cruel or revengeful; yet he may be quick-tempered. His talents are more philosophical than scientific. He will see, and will think a great deal about what he sees. He is fond of wit; is quite given to argument. He loves to talk, is rather vain, and very sensitive. He should study and devote himself to a professional life. He should be a preacher or lawyer, but he could succeed as a writer.

D. A. K. (Dumfries).—It will require the most favourable of circumstances, with a liberal education, and a profession adapted to your talents, to enable you to appear to a good advantage. Success will never satisfy you, for if you do well it will only increase your desire to do better. Your standard is very high. You are enthusiastic almost beyond bounds, and are full of hopes and expectations. It is difficult to confine your mind to this life, and the ordinary duties of the day. You love excitement, are full of sympathy, have almost inordinate ambition, and have excellent talents as a speaker or musician, and should be educated for a speaker. You are not well adapted to business and money-making. You have an observing, critical, discriminating, intuitive cast of mind. Cultivate worldly wisdom, prudence, and moderation.

THE Phrenological Magazine.

FEBRUARY, 1885.

MR. ROBERT INGERSOL.



HIS gentleman is as rare in his way as Shakespeare was in his. Shakespeare had the greatest liberty possible with his pen, and could fully express all his thoughts, feelings, and sentiments in the fullest degree possible, and far excelled any writer of his day. He wrote on a great variety of subjects with equal facility, for he appeared to be at home anywhere, and had at his command a range of fifteen hundred words. Mr. Ingersol is as rare in his day and way; for he is full and running over with feelings and emotions, and is not at all at a loss for language in which to express himself as fully, and with as great a variety of, if not as many, words as Shakespeare himself did.

He has a most emotional, susceptible temperament. The secretions are abundant; the lymphatic and vital functions are very strongly represented, and are joined to a high degree of mental and nervous qualities, and an inferior degree of the muscular and osseous systems. Hence, he is free from physical restraints, and having a predominance of the arterial over the venous blood, and with ample circulation and large lungs, he is easily set in motion, and not easily restrained. Few men have such a physical combination with such a rare development of brain.

He has a large neck, face, and base to his brain, indicating strong animal impulses and attachment to life. Combative-ness is large, giving the spirit of opposition, but he has not the fist and muscle to fight with. Destructiveness is not large, and does not enter much into his character. He may talk severely, but does not cause pain with any pleasure. His earlier history may have given him his special bias of mind and peculiar theological biases, yet his head has a strongly-marked outline, which indicates a very distinct character.

His forehead is full in the centre, and high from the root

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of the nose to the top of the forehead, but it is not so broad and square in proportion; hence, he is not so much inclined to abstract philosophy and reasoning as he is to inductive philosophy and reasoning. His perceptive faculties, although not small, are yet not predominating powers. He is not so general or so minute an observer as many, only as his larger faculties guide his mind to certain men, things, and conditions. His Eventuality and Comparison are leading intellectual qualities, and have a powerful influence on his whole character. He is all alive to what is going on around him, and readily takes note of the news, doings, and events of the day, and can carry information in his mind for a long time. Hence, he is disposed to deal in what satisfies him to be facts; and his speeches would be largely made up of statements of things as he sees them.

Comparison is very large, and is one of the leading qualities of his mind, and gives him superior ability to compare, combine, criticise, and to reason by analogy. It is *the* power of his intellect. This quality, joined to his large Language and strong imagination, gives him very great power of description, and enables him to make a great display of his ideas. His Language is so very large that he can fully ventilate his mind and give off every shade of thought and feeling in bold relief. His forte is in his power to express himself without restraint and to criticise and ridicule, for his large Mirthfulness, or sense of humour and of the ridiculous, is very great, and it would be very natural to gain his ends by presenting a subject in an absurd and ridiculous light, that others would dispose of by straightforward reasoning.

His Benevolence is very large, making his sympathies strong and active, and having a very emotional, pliable temperament, he enters into every subject with his whole soul, and makes it appear to be all important, and thus magnifies and embellishes to an extravagant extent. His Benevolence, being greatly in the ascendancy of all the other moral organs and religious faculties, controls his mind on the subject of theology and religion; hence, goodness and mercy have the entire sway.

The restraining qualities of his mind are the weakest of his faculties. Secretiveness, Cautiousness, Circumspection, Conscientiousness, Firmness, and Self-esteem, are not so strong and influential as Combateness, Benevolence, Ideality, Mirthfulness, and Language. Hence, he gives free expression to his thoughts and feelings without restraint or due regard for consequences. Few men are so conditioned in mind as to speak with less restraint and fear of conse-

quences than he does. Dignity, settledness of purpose, uniformity of mental action, and balance of mental action, are not and cannot be leading features of his character; while ambition, largeness of soul, generousness of feeling, sympathy, scope of mind, power to embellish, sense of the ridiculous, power of verbal expression, ability to compare, criticise, and present his ideas in a condensed, pointed style, joined to his fondness for debate and excitement, are some of



the strongest qualities of his mind. He has none of the set, conservative make-up, but is thoroughly elastic, and fully in sympathy with the freest thoughts and largest liberty the human mind can enjoy. L. N. F.

Mr. Ingersol is one of the most popular lecturers of America, and draws larger audiences than any other living man. He is a lecturer on theological subjects, in respect to which he takes a similar standpoint to that held by Mr. Bradlaugh in England.

THE RELIGION OF PHRENOLOGY.*

18. There are several forms of faith in the world. Counting creeds and splits upon minor points, it may be true that there are 1,100, as stated by one authority. The great branches of the human family have eight great forms of faith and worship. The Turanian have two forms, that of Confucius and that of Laotse; the Aryan have three—Brahmanism, Buddhism, and Zoroastrianism; and the Semitic branch have three forms—Mosaicism, Mohammedanism, and Christianity. Among other branches there are many forms of Fetishism, higher or lower as the development of the people is higher or lower. As the last named has shown itself capable of great expansion, as it places no barriers in the path of human progress, but rather helps it forward in many ways, we may not be far wrong in supposing that a true Christianity, the Christianity taught in the Sermon on the Mount, will be the religion that will continually gain force as the ages roll onward. It, like the rest, has grown better as it has come nearer to the real teachings of Christ.

19. Fetishism is very ancient—is, probably, the first form of faith and worship. It is followed by the worship of ancestors, then by saint worship; then follows the worship of some great God through lesser ones, until at length the worship of some blind forces of nature—supposed to be inimical to man—rises to the conception of one God, and the idea of Him changes and extends until He becomes the ever-present and all-loving One. There is no limit to the expansion of this idea. In his own secret soul every man worships his own conception of the Divine Being. We have no need to turn to universal history to show the growth of the God idea; we have cited two such; our own sacred writings give evidence sufficient. Look at the God of the ten plagues, the slayer of idolatry, the being who opens the earth and swallows hundreds of men for a schism, and sends a plague to kill “fourteen thousand and seven hundred,” for a doubt that such a punishment was too severe; a destructive God, a God of fiery serpents and flaming swords. Look, again, at the higher conception of God found in the Psalms of David. The “God of merciful kindness, whose mercy endureth for ever,” but who is still capable of making his enemies his footstool, and striking through kings in the day of His wrath. See, again, the general tenor of the minor prophets; imprisonment has taken the place of death, and there are many sweet

* A Lecture by Mr. Jas. Fraser, Phrenologist, of Auckland, New Zealand.

promises of restoration and restitution. Habakkuk rises to a sublime faith such as even a David cannot feel. Even in the Old Testament we see ideas of God improving, and His worship having in it less need for bloody sacrifice.

20. When we come to the New Testament, we are introduced to a new view of God, the dread God of battles; the mighty Thunderer has now become the loving Father in heaven. Who has read the Sermon on the Mount—that sermon of sermons which rolls down the centuries, ever appealing more and more forcibly to the higher faculties of men, lifting them up out of an atmosphere of greed and strife, and pride, and lust for place and power, into a peaceful self-abnegating and holy love of others—without being struck with the frequent use of the word “Father,” as applied to God? “Our Father which art in heaven,” is the grand key-note of the Christian idea of God. It took the human mind we know not how many centuries to grow up to this idea of God; and, even yet, thousands of men preach thundering and denunciatory sermons from their pulpits, Sunday after Sunday, in which there is but little, if any, “Father,” and a vast amount of the terrible God of a semi-fossil age.

21. The Father idea is not yet a quarter grasped even by the most advanced of us. Do not think for a moment that your lecturer grasps it, or that you can. No man on earth can perceive more than a small, very small part of its full and mighty meaning. We can only begin to grasp the idea of Father by trying to conceive of what Son means. The sonship of man may sometime lead us to know something about the fatherhood of God. At present we can only conceive of God through the study of man, the study of human attributes, faculties and feelings. If we cannot yet get to know all about the faculties of the human mind and what is the range of their action, how shall we understand those powers when they become infinite, when they are God’s powers? Our science, human science, phrenology has done much towards giving a clear view of human powers, and therefore gives us a clearer idea of Divine ones. By its aid we may try to grasp what is least and nearest, that we may eventually get hold of that which is greater and further away. What does fatherhood mean in man? Why, with all its imperfections it means desire to help the child; desire to save him from pollution and danger; the desire to guide him into the best way by counsel and experience. No human father, having a father’s love, will allow a son of his to run to ruin and perish while he can stretch out a hand to save him. If fatherhood in a man

means so much, what does it not mean in a God? We may conceive of the great Father as all-powerful and ever-present, and if so, able to save, able to follow each son down to the lowest depths. Can a child be lost from the presence of such a Father, of a being outside of all life in its beginning and its ending, in this world and in that? I will shortly explain how even that *may* be.

22. The son idea may be partly read in the nature of man. We exist as dual beings, having in ourselves a material animal life, a spiritual immaterial life. One is the real life, the life that lasts; the other is the life of constant change and death. The one is bodily life that takes up its food, makes it part of itself, uses it, and throws it away when done with; the other is soul life that undergoes no such change. The one is fluctuating, the other constant; the one passes away with every breath, the other remembers and retains ideas; the one is to-day part of my body and may to-morrow be part of yours; the other is the individual life that remains all the time undergoing no changes, except those of growth and experience. The one cannot retain its integrity and individuality for two consecutive moments; the other says, "I am," and loses no part of its conscious life while its material envelope changes; the one is matter, the other is mind; the one is passive, the other active. The material part has been material ever since the first nebular cloud filled space, and will no doubt ever remain such. Science proves the unity of matter, proves the existence in sun and stars of matter similar to that which we see and feel, and which forms part of your bodies and mine. By our material covering we are related with an eternal past and an eternal future with that which is nearest and that which we should find beyond that distant nebula could we mount upon a light ray and fly five millions of years. This relationship science proves. Our bodies are matter—so is the solid, fluid, and gaseous universe; as one changes the other changes, but nothing is ever destroyed. As our bodies grow and change and die, and in time form part of other structures, so, for aught we know, may worlds and systems of worlds grow, change, die, and undergo reconstruction. We are in thousands of ways related to the earth upon which we live; we have not time to point out even a few of them. We have said enough to show that the old story of the formation of man of the dust of the ground is a scientific fact, and that our material bodies are indeed sons of mother nature, and behave as does other particles of matter around us.

23. This son idea has its spiritual as well as its material

side. Through matter we are sons of mother nature : through spirit we are sons of father God. The first is proven ; can we prove the second ? What is the relationship between matter and spirit ? We cannot tell all of it. We know that spirit co-ordinates the arrangements of matter ; that is the real moving force ; that all we may see of spirit we see through the arrangements of matter. This arrangement we see on an infinitely great scale around us any starry evening ; and if we take the microscope in hand we may see protoplasm weaving structure out of the unformed material of the blood under the guidance of organic nerves in any part of any living structure. That which co-ordinates the labours of all these millions of structure-builders, the organic nerves, in the man is the spirit of the man : that, also, which co-ordinates the labours of all these busy men, or all these busy solar and stellar systems, is the God. How does the spirit act upon the matter of the universe ? When you have told me how the spirit of man takes hold of material outside of itself and makes it into its own body, I will answer the question. This we know : the spirit is active, the matter is passive all through the universe. When matter appears to evolve anything, to act alone, it does so just about as your watch works so long as its spring retains the force you involved in it when you last wound it. Matter is our mother ; spirit is our father ; through the dust of the ground we are related to one, through the breath of life to the other. By one we are related to the infinity of matter in space and time, by the other to the infinity of spirit in space and time.

24. Some may say this is Pantheism. If the thought was left here, that might, in part, be true. We cannot so leave it. We have shown how matter acts like universal matter. We can also, in part, show how spirit acts like universal spirit. We have seen that in the higher realms of man's nature there are faculties relating us to spirit ; that these are the moral and religious faculties. Without these we might only be alive, and our individuality be reduced to that of a plant or an animal. There are certain relationships between matter and matter. The attraction called gravitation is one such ; the attraction called cohesion is another such. What the laws of gravitation and cohesion are to matter, so are the laws of moral rightness, conscience, of dependence and faith, veneration and spirituality, to spirit. In other words, what the various laws of motion and rest are to matter, so are the various laws of our moral and religious nature to spirit. Plants are governed by the laws of matter ; but, for aught we know, they are not conscious and not responsible. Animals

are also governed by the same laws, but they are conscious ; they fear to break them ; they are responsible ; when they break them they suffer. Animals may be related to the laws of spirit as plants are to the laws of matter, but if governed by such laws it will be hard to prove them conscious and responsible. The probability is that they are not aware of moral government, and not morally responsible. We are governed by the laws of matter, as such, by the laws of organisation, and by the moral and spiritual laws. We are conscious of all three, and therefore responsible to the extent of our consciousness. This last, consciousness and consequent responsibility, is at once the principal difference between us and the lower animals, and the most marked relationship between us and the great All Father. Just as we are physically conscious of gravitation drawing us to earth, and compelling us to move in accordance with its laws, or suffer, so are we conscious of the laws of moral rightness, conscience drawing us to act in accordance with its commands, or suffer. The first consciously relates us to infinite matter ; the other to the infinite spirit. This, at any rate, is not Pantheism ; it cannot be such while it relates us to a personal being upon whom we are dependent, and to whom we are responsible at all times and under all circumstances. This is spiritual oneness—a relationship infinitely closer than that which exists between a human parent and child. This that we have reached by reason must have been the feeling which led Tennyson to sing :—

“ Speak to Him, thou, for He hears, and spirit with spirit may meet ;
Closer is He than breathing, and nearer than hands and feet.”

25. Christ long ago taught this truth, but we seem to have forgotten it or hidden it in creeds. “ I am the vine, ye are the branches.” How can such an idea of Father and Son, of Divine in human, and human in Divine, be reconciled with the doctrine of devils, that some men are born to be vessels of wrath ; born to eternal damnation ? How, too, can we understand eternal punishment ? We must be punished while we are conscious, free, and responsible beings, if we break the laws of our being. And just as consciousness and responsibility rise to greater heights, so will our capacity to enjoy and suffer continually increase. We have seen a brief comparison of plant, animal, and human life in that respect. We have implied, also, the extending range of consciousness through growth of sense and faculty. When consciousness extends to an ever present feeling of the Divine within us, and when responsibility, in consequence, extends until we feel ourselves ever accountable to that moral Monitor ; when,

in short, God-like conscience takes its natural place at the head of the moral feelings, and these feelings at the head of human action, there will be no need of punishment and no fear of it. It will be as natural to do right and be happy, as it now is to eat and breathe.

26. In the meantime, punishment must follow upon breach of law ; must every time fall upon the offender ; must ever be exactly in a line with the transgression, must ever be exactly in proportion to that transgression ; and will always cease just when it has accomplished its purpose. It may be eternal. Fire burns. We may imagine a child ignoring this, and every day burning itself. The laws of heat and structure will not be repealed upon that account ; just as long as the child fails to recognise this natural law, so long will the fire burn its body and inflict suffering in proportion to the injury. What is true of one law is true of all, and in our ordinary life we recognise it, and try in some rough fashion to administer punishment to criminals in imitation of the Divine laws of nature. Animals recognise a punishment that follows swift and sure upon a transgression. "The burnt dog fears the fire." We are under the reign of higher law, and can enjoy and suffer under the reign of these laws. A man may form the habit of sinning ; may, in spite of suffering, sin on ; in that case he may, for aught we know, sin for ever, and incur everlasting punishment.

27. There are men who will say that they cannot sin in another state of being. We do not know that ; analogy tells a different story. Resisting temptation leads us to moral growth in this life ; we cannot conceive of a happy future state without moral growth ; we are then almost forced to the conclusion that conscience must still act ; must, as heretofore, choose between right and wrong. Wrong must ever be wrong, and cannot fail to be attended with pain. Some will say, again, that a merciful Father will not always punish. Why say so when it is evidently mercy to punish ? Shall the fire cease to give the child pain when it is burnt ? If so, the child may play with bright flames until its hands become charred stumps. Where would be the mercy that relieved a child from pain at such a price ? Under these highest laws we suffer or enjoy more than any others ; and that, too, because they are the most important. Philosophers and divines agree in giving them the highest place. Moral rightness is placed before intellectual ability, before place, power, and wealth. Seek righteousness first is an injunction laid upon every man. There is yet another class of men who think it will be easier for them to change their

ways and become righteous, or conform to moral laws in another state. I am sorry to say that human science offers no consolation here ; that it plainly teaches the reverse. We know that formed habits are not easily broken here and now ; that it is difficult to get an old man to change his ways ; that during the plastic period of youth, such changes are easily introduced. *As the plastic stage of youth to non-plastic age, so may be this plastic life to that more fixed one.* For my own part, I will not trust to sin being impossible there and then ; I will not pin my faith to any change in the Divine nature ; I will not dare to trust to the work of to-day being easier to-morrow, for I hear the cold marble lips of science uttering again the words long since spoken, "Repent, or perish."

28. Out of this idea of fatherhood there springs quite naturally that of brotherhood. If nature is, in all the grand senses, named our mother ; if by all these close ties we are inseparably linked to God as sons, our being partaking of His being, it follows that we are brothers. All the branches, trunk, and root form the tree ; each branch and twig forms a part of the tree ; we are branches and twigs, and, therefore, parts of the tree. As branches of the tree, we rattle against one another, and quarrel because we do not look down far enough to the parent trunk. Have we not long since seen that we are related by our material nature, and that every throbbing artery of our spiritual being responds only to the beatings of the Divine heart ? Take another figure. An individual commences life on earth and that moment commences to throw off, through lungs, skin, liver, bowels, and kidneys, particles that now compose his body. He takes other particles on in place of them, takes more on than he throws off, and, as a result, he grows. This process goes on until the period of full growth is reached, and then there is a time during which waste and repair are about equal, and, lastly, one in which the former exceeds the latter. The worn-out atoms are thrown away from the being ; and rise again when prepared in nature's laboratory to serve our purposes in living structure. The particles taken on are atoms, indestructible individual atoms, the changes that take place are changes in combination, when so changed they are thrown off. Let the race of men take the place of the individual man, and let the individual man become an atom, and the analogy is not far from perfect.

29. Carry the idea further. A healthy man is one whose body is composed of an abundance of perfectly healthy atoms, every one of which properly discharges its own

functions. A healthy man is a pure man ; one thoroughly healthy in every department of his being is perfectly good. In order that we may have such a one, we must have every atom perfectly good. In the combination of atoms called a body, we have stomach, lungs, heart, and head. The first gets ready the raw material, the second vivifies it, and makes it ready for use, the third circulates it to every part, and the fourth co-ordinates the movements of the whole to serve the great purposes of life. In that greater body in which each man is but an atom, we again have producers, manufacturers, circulators, and the intellectual classes who control ; and, *as* in the body, the harmonious working of these four is health, *so* in the larger body, harmony between production, manufacture, and commerce, the whole being under the control of social, intellectual, and moral power, is health. Again, perfect men under perfect government. At present, while we blindly work in ignorance of what each other is doing, we are continually liable to over-production—too much raw material of some kinds that has to be sacrificed at prices that won't pay the grower ; to excess of manufacture, causing a glut in the goods market, reduced prices, starvation wages, poverty, and crime ; to speculative commercial ventures, and consequent panics ; and all this because the co-ordinating power is too low down. Acquisitiveness and Secretiveness rule the world instead of moral and religious feeling and intellect. The glut of over-production corresponds with stomach disease ; of over-manufacture, with inflammation and congestion ; and commercial panics, with irregular heart or circulatory action. Any individual man who regulates his life by passion and blind feeling, will frequently render himself liable to these complaints ; while if he put his passions under the proper control of his higher faculties, he will enjoy health. So will the greater body enjoy health when its greater life is under the dominion of his highest faculties.

30. Nothing but the recognition of brotherhood and fatherhood, and willing submission to the guidance of the Divine Monitor, will ever alleviate human suffering. Our solidarity is in part recognised by improved sanitary regulation. We have found out by bitter experience that fever generated in back slums can touch with its burning fingers the lives of residents in West-end suburbs, and many of our far-seeing philanthropists are engaged in removing our moral fever-spots, well knowing that these festering ulcers send off, through many a tortuous channel of circulation, the germs which take root just where least expected. If we put alcohol, as raw material, in a human stomach, it is not long before it finds its

way to heart and brain, and through the circulatory system to every part of the body, and it injures everything it touches. Even so does it find its way from the distillery to the mart, and through the arteries of commerce to the remotest confines of the earth, injuring alike the gum-digger in his hut, the Indian in his wigwam, the Maori in his whare, and the prince in his palace. Nothing but the higher religious life which makes Fatherhood and consequent Brotherhood its supreme idea, will prevent the manufacture and sale, the digestion and circulation, of things which, by injuring some, react upon and injure all.

31. We are taking some few steps in the right direction. We are carrying religion, civilization, art, science, and commerce to every part of the world. We are recognising the fact that every child should have a chance of education ; that every man having an interest in his country, should, by his vote, share in its government. These are footfalls of the coming King. International exhibitions, international science publications, international telegraphic and railway communication are already accomplished facts. Congress of the world's intellect is already more than mooted, and several international Parliaments have already met, preparing the way for more permanent ones. Nearer footfalls of the coming King. We want international Parliaments of labour, production, manufacture, and commerce, all recognising the rights of man—all under the sole control of the Divine monitor ; all inspired with the feeling of universal brotherhood ; all determined that no poor section of the community shall be deprived its rights to full development of what power it has ; all determined that the faces of the poor shall not be ground under the iron heels of selfish competition and greed ; that the purchasing power shall not be taken away from it by starvation wages ; that labourers shall not blindly produce too much of one article ; that manufacturing skill shall not in one part of the world produce that which in any other shall be intended to injure any human body or soul. On these will follow international currency instead of cumbrous exchange, and international standards of weight and measure, and an international language, combining the best words of all languages—a language that all can read, and that will enable all men to converse wherever they meet. If, at the head of all these, we have a true religion, worshipping the universal Father, and loving and conserving the interests of the whole brotherhood of man, we shall have the throne prepared, and the feet of the King will not be far from its steps.

32. We have seen that religion is an idea of God, a worship,

a faith, and a rule of life. We have tried to grasp an idea high enough to include at once scientific and theological Theism. We have etched out a few of the broad outlines of a religion that must gradually swallow up or obliterate petty differences, or regard them as necessary individualisms arising from the many-sidedness of the human and Divine nature, and therefore good. We have seen the duality and imperishableness of the universe, and the duality and imperishableness of man. We have seen how matter makes him part of matter, and how intimately spirit may connect him with the great spiritual forces of all worlds. We have seen, too, how in a special sense by certain faculties found in human minds, and absent in lower ones, we are brought into actual personal dependence upon, and personal responsibility to a Living Personality, a real, Divine Father. We have looked out and seen the distant hill-tops tinged with the ruddy light of a rising day, a day during which that Father will be King, and in which the sonship and brotherhood of man will be universally recognised. Faint though the lines may be, the picture is a grand one, and though the plains and valleys are yet hidden in the shadow, that light upon the hill-tops betokens a glorious day.

33. Before this spreading light materialism dies. In this light, science—so often supposed to be inimical to religion—is seen to be a twin-sister, or, closer still, a head that regulates the beating heart. In this light, selfishness is seen defeating its own ends, and before its earlier rays superstition and fanaticism will fly from the realm of mind, the nightmares of pestilence and famine will be remembered as a dream that is passed, and the prowling wolves of war will creep behind their dark rocks and die. Materialism—that Dead Sea fruit that turns to dust and ashes in our mouth—can only grow in darkness and from poisoned soil, and must also wither and die in this light, for the rays can only spread as we recognise the spiritual and real fatherhood of God, and the complete, real, material and spiritual brotherhood of man.

This is the natural religion, the religion of Philosophy and Human Science ; this is the Religion of Phrenology.



REMEMBER that if thou marry for beauty only, thou bindest thyself all thy life to that which perchance will neither last nor please thee one year ; and when thou hast it, it will be to thee of no price at all, for the desire dieth when it is attained, and the affection perisheth when it is satisfied.—*Sir Walter Raleigh.*

GEORGE ELIOT AND PHRENOLOGY.

THE following extracts are from the autobiography of the late Mr. Charles Bray, who for many years enjoyed the intimate friendship of George Eliot. Mr. Bray was an old and tried phrenologist, and wrote a number of articles for the PHRENOLOGICAL MAGAZINE:—

IN the best notice that has appeared of “George Eliot’s Life and Writings” (*Westminster*, July 1881), the reviewer says: “We have found in her teachings the enforcement of the doctrine of consequences more richly illustrated, more variously applied, more scientifically stated than ever it was before.” I am glad this is the writer’s opinion: still I do not give up my claim to having made the best scientific statement of “The Law of Consequences as applicable to Mental, Moral, and Social Science.” George Eliot always also held with me as a sequence to such doctrine of consequences that one of the greatest duties of life was unembittered resignation to the inevitable. At that time we were both very much interested in phrenology, and in 1844 she had a cast taken of her head by Deville in the Strand, which is still in my possession. We afterwards took lessons of Mr. Donovan, on Organology, when he was staying at Coventry, and converting all the leading men of the city to the truth of the science by the correctness of his diagnosis of character. Miss Evans’s head was a very large one, $22\frac{1}{4}$ in. round; George Combe, on first seeing the cast, took it for a man’s. The temperament was nervous lymphatic, that is, active without endurance, and her working hours were never more than from 9 a.m. till 1 p.m. The third volume of Strauss was very heavy work to her, and she required much encouragement to keep her up to it. In her brain development the intellect greatly predominated; it was very large, more in length than in its peripheral surface. In the feelings, the animal and moral regions were about equal, the moral being quite sufficient to keep the animal in order and in due subservience, but not to be spontaneously active. The social feelings were very active, particularly the adhesiveness. She was of a most affectionate disposition, always requiring some one to lean upon, preferring what has hitherto been considered the stronger sex to the other and more impressible. She was not fitted to stand alone. Her sense of character—of men and things—was a predominatingly intellectual one, with which the feelings had little to do, and the exceeding fairness, for which she was noted, towards all parties, towards all sects and denominations, was probably owing to her little feeling on the subject—at least, not enough to interfere with her judgment. She saw all sides, and that always manlily, clearly, and without prejudice.

MEN that marry women very much superior to themselves are not as truly husbands to their wives as they are unawares made slaves to their portions.—*Plutarch*.

THE PHILOSOPHY OF SLEEP AND WAKEFULNESS.

BY DR. SAMUEL EADON.

MATTER—what is it? Of its essence we know nothing, save that it is an unknown inert something outside of man, possessing numerous properties which have an aptitude to affect the senses, and, by consequence, the brain and the spirit of man. Of the substratum in which these properties inhere we are in utter ignorance. When God said “Let there be light,” a force now known as the great trunk force of Nature—the universal law of gravitation of Sir Isaac Newton—was instantly transfused through countless amorphous forms of matter, endowing them with attractive and repulsive poles—*i.e.*, with centripetal and centrifugal tendencies, whereby the spheric form was, of necessity, assumed, as well in the evanescently small as in the magnificently large; each body, whether small or large, possessing an attractive and repellant pole, and surrounded with an atmosphere, or magnetic aura, peculiarly its own. These forces obtained universally, in respect of all forms of matter, whether mineral, vegetable, or animal—*i.e.*, whether a crystal, a flower stem, or even man himself.

The sun is the mighty magnet of our system, but of all the less magnets, in the three kingdoms of Nature, man, the crowning masterpiece of organised matter, and of force iufusion, is the most wondrous and intricate in mechanism throughout the wide domain of the works of God.

From the great trunk force of gravitation, which the genius of the immortal Newton discovered, and unfolded for the benefit of the whole human race, is derived all minor forces of whatever kind and degree. Some of these forces expand molecules, others liquify or solidify, or make them aerial; *this* converts oxygen into azone, while *that* polarizes and raises it to a higher order of force, called by Baron Von Reichenbach the O.D., or odic force, which, streaming from the brain and nerve-centres in direct currents, constitutes them the fountain of health, and renders life enjoyable.

Man, being a bundle of magnets, with attractive and repellant poles, each organised molecule being itself a little magnet surrounded with an aura peculiarly its own, and placed, too, amid a universe of larger magnetic bodies, some acting in close proximity, and others from afar, would it not be strange if we did not sometimes feel attracted to one form of matter rather than to another. We are the creatures of magnetoid, or odic forces, and have, absolutely, little will-power in our actions. Two forces govern us, the attractive and the repellant, and

we play the fool in all sorts of fantastic forms, just as the one or the other is in the ascendant.

Since man is a congeries of magnets, with positive and negative poles, odic currents not only pass from point to point, but flow according to certain established laws. In health the currents are direct, and from above, downwards; in disease indirect, and from below, upwards. Faraday, Matteuci, and other experimenters, have demonstrated that tonic currents are *direct* and proceed *from* the brain to the caudal extremities; but that clonic, or lethal currents, flow in a contrary direction. The *direct* and *indirect* currents pass under various names, as *health currents*, direct currents, positive currents, sthenic currents, tonic currents, and attractive currents: *disease currents* as indirect currents, negative currents, asthenic currents, clonic currents, and repulsive currents. If a balance exist between these antagonistic forces, a state of healthy wakefulness exists, and is compatible with tone; but even if a slight reversal of polarity happens, and the repulsive force affects abnormally the direct currents, without overwhelming them entirely, a train of events occurs, symbolic of clone, and a diseased condition is set up. Each force must be supreme in its own domain, and no interchange of action exist, in any appreciable degree, if an equilibrium of healthy action is to be maintained.

Having made these preliminary observations, we may venture to ask what is sleep? or rather, what is the condition of the brain when sleep is superinduced? One thing is certain, the cerebral mass is in a different state when asleep from that when awake. For an unconscious state, like that of sound sleep, there must be an adequate cause; and cause enough there is. Sleep, all sleep, in fact, is magnetic, and depends on a close approximation, more or less, of the molecules of the brain and those of the nerve-centres; and wakefulness arises from the action of divellant forces keeping apart, more or less, the cerebral molecules. In other words, sleep results from attraction; wakefulness from repulsion. The more impellant and internal the attractive force, the deeper and more refreshing is the sleep; the more repulsive and external the force, the more divellant will be the cerebral molecules, and the greater the wakefulness. Should sleep come on from exhaustion, or from being awake too long, it will be sleep without much refreshment. All sleep is not alike. One hour of real normal sleep will give more work-power than six times the quantity of another kind. A sailor will tumble into his hammock, and with four hours of profound sleep rise more refreshed than some men with a dozen hours of rest.

The phenomenon known as sleep may arise from external causes, as well as from those of a more central and internal character; though outwardly in appearance the same, the result will be very different in a hygienic sense. A splint of skull-bone pressing on the brain, or an effusion of serum or of blood from a congested state of the cerebrum, or the indigestion of food from over-gorging, or the mal-assimilation of the contents of the colon, according to Dr. Prout's notions of the primary and secondary processes; or the action of opium, of chloroform, and of other narcotics; or the stertorous coma of dead-drunkenness; all, or any of these, may induce the state known as sleep; but the sleep is very different, both in kind and degree, from Nature's balmy sleep. There are then two kinds of sleep, one arising from a central internal impulse (natural); another from causes external (abnormal). The first kind is a *direct tonic* to the system, refreshing and brain-charging, and prepares a man for a hard day's work; the second is indirect, clonic, debilitating, and sooner or later brings about a condition detrimental to the general well-being of the system.

In natural, healthy sleep, the brain lies motionless in the skull, and occupies less room than in the waking state; but, if a person begins to dream, motion is at once perceived, the brain having been known actually to protrude itself from the skull, and to produce cerebral hernia. This phenomenon was observed in a case in which a part of the skull had been carried off during military operations; and also in another case when the skull had been trephined, and the brain laid bare to view, in the hope of restoring the person to a state of consciousness.

Sleep, then, is the result of an attractive force taking place amongst the molecules of the brain and in the nerve-centres; wakefulness, on the other hand, arises from a repellant action among these cerebral particles. The following may serve as an illustration: place the palm of the hand on the brain of a man whose calvarium has been removed. With the slightest pressure the man goes off into a state of sleep; remove the hand and he at once wakes up. This is a practical test, proving that sleep results from an increased compactness in the molecules of the brain and nervous matter, and that of wakefulness, from removing the pressure, and allowing the particles to move more freely amongst themselves—*i.e.*, sleep arises from a close position of brain particles; wakefulness, from their greater or less separation. Some people are more sensitive to the induction of sleep from external causes than others. In every assembly of persons, for instance, there will

always be found one sensitive person, sometimes three or four, or even more, out of every group of twenty-five persons. In some instances, so susceptible to the influence of the OD force are some persons, that merely holding before the eyes, and about an inch away, the pyramidal end of a rock crystal, or a crystal of nitrate of potash, or one of sulphate of magnesia, sleep will take place. Sometimes looking for a short time steadily into the eye of a person, or making a few passes from the crown of the head to the pit of the stomach, will be enough to bring on the magnetoid or Odic condition. On the other hand, presenting the blunt end of the crystal, or making the upward pass, or producing upward currents of air with a piece of pasteboard, or by simply fanning, will remove the sleep, and restore a person to the wakeful condition. Similar effects may be brought about in another way. Put a disc of zinc to the nape of the neck, and a half-sovereign, or a bit of platinum, or of copper, to the soles of the feet, and the *direct* current will be at once established, and consequently sleep superinduced; reverse the metals, and wakefulness will be as quickly brought about.

From what has been advanced, sleep, tone, and health depend on Odic currents flowing, in direct and downward streams, from cerebral and other nervous centres; whilst, on the other hand, wakefulness, clone, disease, and pain, arise from a reversal of these polar currents. If the attractive and repulsive forces balance each other, then sleep and wakefulness recline on natural laws, and a healthy habit of body obtains; but if the reverse currents infringe the domain of the direct, in ever so small a degree, a "temporary derangement of organisation," as Sir Charles Clarke expresses it, at once takes place, and disease, to a greater or less extent, is set up. To have health, then, we must avoid the reversal of the polar currents. Herein lies the practice of physic in a nut-shell; whoever can devise methods, or discover a drug or series of drugs which, when followed out, or taken in, will cause a constant, direct flow of the odic currents from the brain to the feet will be the Newton of physic. To do this has really been the aim of all kinds of treatment, from the earliest ages to the present time, but men knew it not. This was the object of the *vis medicatrix naturæ* of Cullen; of the heat-life principle of Thompson; of the Occult Cause of Rush; of the vital principle of Hooper; of the chronothermism of Dixon; of the dynamism of Hahnemann; of the augean body-cleansing processes of Priessnitz; and of all the bathing appliances in all the fashionable watering-places throughout the world. This seems to be the great generaliza-

tion law of physic, and includes all other laws. Who can point out the remedial agent—*i.e.*, the something to take or the process to follow, which will infallibly restore the reversal of the polar currents of every magnet of the body, great and small, to the natural, direct, tonic, and healthy action? Who can point out, for the benefit of mankind, the great panacea which will “fetter strong madness with a silken thread, cure ache with air, and agony with words”; and for this result invariably to follow whenever the remedy is given or applied? The gauntlet is thrown down, who can take it up, and be the Sir Isaac Newton of the medical world?

In the course of this paper we have pointed out several methods by which the direct and reversal currents may be superinduced; but this is not much, something more is required. An unknown catholicon is wanted, applicable to all mankind. It exists somewhere; who can find it and thus immortalise himself? “This is the question,” as Hamlet says; “Who can answer it?”

INFLUENCE OF MIND OVER BODY.

MR. CROSSE had been bitten severely by a cat, which, the same day, died from hydrophobia. He seems resolutely to have dismissed from his mind the fears which must naturally have been suggested by these circumstances. Had he yielded to them, as most men would, he might not improbably have succumbed within a few days or weeks to an attack of mind-created hydrophobia—so to describe the fatal ailment which ere now has been known to kill persons who had been bitten by animals perfectly free from rabies.

Three months passed, during which he enjoyed his usual health. At the end of that time, however, he felt one morning a severe pain in his arm, accompanied by severe thirst. He called for water; but “at the instant,” he says, “that I was about to raise the tumbler to my lips a strong spasm shot across my throat. Immediately the terrible conviction came to my mind that I was about to fall a victim to hydrophobia, the consequence of the bite I had received from the cat. The agony of mind I endured for one hour is indescribable; the contemplation of such a horrible death—death from hydrophobia—was almost insupportable. The pain, which had first commenced in my hand, passed up to the elbow, and from thence to the shoulder, threatening to extend. I felt all human aid was useless, and I believed that I must die. At length I began to reflect upon my condition. I said to myself,

‘Either I shall die or I shall not; if I do, it will only be a similar fate which many have suffered, and many more must suffer, and I must bear it like a man. If, on the other hand, there is any hope of my life, my only chance is in summoning my utmost resolution, defying the attack, and exerting every effort of my mind’; accordingly, feeling that physical as well as mental exertion was necessary, I took my gun, shouldered it, and went out for the purpose of shooting, my arm aching the while intolerably. I met with no sport, but walked the whole afternoon, exerting at every step I went a strong mental effort against the disease. When I returned to the house I was decidedly better; I was able to eat some dinner, and drank water as usual. The next morning the aching pain had gone down to my elbow, the following day it went down to my wrist, and the third day left me altogether. I mentioned the circumstances to Dr. Kinglake, and he said he certainly considered I had had an attack of hydrophobia, which would possibly have proved fatal had I not struggled against it by a strong effort of mind.”—*The Cornhill Magazine*.

THE HYDEBOROUGH MYSTERY.

A TALE OF A GREAT CRIME.

BY CAVE NORTH.

CHAPTER IV.

THE VAGRANT.

The following day being Saturday, Letitia was left much to herself, and consequently had plenty of time to think over the important event of the previous day. But it was not with anything like calmness of spirit that she could do so, her whole nature being still athrob with the first delicious sensation of loving and being loved—a feeling which, say what we will, has no kin. Her thinking, therefore, was merely a living over again the experience of yesterday; brooding over it, rejoicing in it, till she seemed in a kind of trance. Every now and again she would shake off this dreaminess, and say to herself: “I will think the matter over calmly, and consider its consequences;” and she did get as far as this deliberate judgment: “Yesterday was Friday, and that’s unlucky!” but she got no further. But no shade of the reputed unluckiness crossed her mind. She was supremely happy, and longed for someone to whom she could tell her happiness.

But there was no one she could open her mind to. Her aunt was not one to draw out the confidences of young people; and if she had been there was an unfortunate hindrance. The fact that she had surprised Pennyfold’s secret, and had set her mind against

the fruition of his love for her, formed an insuperable bar to such confidence. To her maid it was alike impossible to communicate her secret, which, through her sieve-like nature, would speedily have percolated to the whole household. She longed, therefore, to see Miss Goosey, in whom she knew she could trust. But Miss Goosey held an important position in a millinery establishment, and would consequently be too busy to bestow any time upon her to-day. The young lady was compelled, therefore, to curb her impatience.

On Sunday evening Letitia had the delight of walking from church with her lover. They could not very well talk together on the subject that was nearest to their hearts, because the good Mayor and Mrs. Softly were walking close behind them; but they could look into each other's eyes, and that was almost as good. At the gate, however, they lingered a few minutes over their farewells, and Pennyfold whispered as he pressed her hands—

“You have made me so happy, Letitia!”

“Have I?” said the young lady. “I too am very happy!”

And as they gazed into each other's eyes with that long look that lovers only know, they seemed supremely happy, blessed indeed. Pity such moments cannot last!

Letitia from her window saw her lover descending the Scaleby fields, and watched him until he was hidden from view. Had her eyes been gifted with more telescopic vision, she would have seen him, when he reached the bridge, turn round and gaze with lingering fondness upon the house, till the twilight deepened, and a mist crept up from the river. Then he directed his steps homewards, but again from the terrace or bluff on which his mother's cottage stood, he tarried and looked over the valley to the spot where, enshrouded in trees, he could descry the lights of Acacia Villa.

The night was mild, and he made that an excuse for throwing open the window, after vainly attempting to fix his attention upon a book, and stepping out upon the lawn, where he felt that his tell-tale looks were hidden from the scrutinising gaze of his mother. For so modest and retiring is young love, that Pennyfold felt he could not, at present, take his mother into his confidence, although it was the first time in his life that he had withheld any thought from her.

The knowledge that he had such a secret weighed somewhat upon his mind. Soon he decided he must tell her; but how soon? Then, connected with this, was the equally important question of his obligation to his uncle. He must make up his mind to unboſom himself in that quarter, and with the least possible delay. It would not do to carry on a clandestine courtship. What his uncle would think of his intention to marry he could not imagine; he supposed, however, that he would be against a speedy union on the score of prudence.

But so delightful was the sensation of loving and being loved, that the possibility of difficulties to be overcome did not greatly concern him. Indeed, it is the characteristic of a great love, as of any great

emotion, that it possesses the power of a diminishing lens to make difficulties small and distant, while to a weak love the smallest obstacles look threatening and insuperable.

The necessity of informing the Mayor and Mrs. Softly of their mutual regard, however, took such hold of Drupe's mind that the very next time he saw Letitia he opened the subject to her as soon as time could be spared to do so. Her reply was—

“Do we need to tell them about it so soon? Will it not do in a little while?”

The mere delight of loving was so great that Pennyfold did not urge the matter; and so they met and confided their thoughts, their emotions, their hopes, their pleasures to each other, and were satisfied for the time being to let things be as they were. Love was enough.

From seeing each other as occasion offered—that is, when business or pleasure brought Pennyfold to Acacia Villa, or when they met at church—they began to plan rendezvous. Letitia took early walks, when she was sure to meet her lover coming to town; Pennyfold seized upon the slightest pretexts for going in the direction of Cuckoo Road, which led to the Mayor's house; they arranged meetings at lectures and such entertainments as the Puritan tastes of Mr. Softly and his wife would sanction. As Miss Goosey, however, invariably accompanied Letitia on these occasions, she had presently to be let into the secret: moreover, as there was nothing that Miss Goosey kept from John Henry, he too soon shared the confidence of the lovers. But as these two were a very discreet pair, there was nothing to be feared from their participation.

Still, Pennyfold Drupe was far from satisfied, pleasant as was all this love-making amid the summer flowers and beneath the quiet, secret-loving stars. He felt that his uncle ought to be made aware of what was going on, and that he would have just cause of complaint when the secret came out. He from time to time made his cousin acquainted with his scruples. The secrecy of their wooing was distasteful enough to her, but with the knowledge she possessed she thought it would be fatal to their happiness to make their secret known to their uncle and aunt. She put this to Pennyfold as a supposition when the plea of “Why so soon?” no longer sufficed to quieten his accusing monitor within; and as such it had its effect for a time. But soon, his scruples becoming clamorous again, Letitia felt obliged to impart her secret to him.

The disclosure disturbed Pennyfold not a little; it raised a large cloud upon his horizon which had hitherto appeared comparatively clear. It gave him occasion to pause and think; he resolved to take time to consider, and not to act without caution.

“Meanwhile,” he said to Letitia, “it will be well for us not to meet so often; that is, by appointment.”

Letitia agreed.

“I shall miss your dear face in the morning on my way to town,” continued the young chemist; “and of evenings I shall often long

to listen to the same lecture with you, and to point out the different stars to you as we walk home together; but it will be for the best, will it not?"

The young lady replied that it would, but probably only half meant it; for few women, to whom love is their religion, see any harm in a bit of secret adoration.

"And then," Pennyfold proceeded, "although you will not see me, you will know I am thinking of you. At night you will see a light in my little room over there, and you will know that I am working hard for your sake. You know my room: the window is right up there in the gable, between the roses and the stars; it is my workroom, study, and general 'lumberary,' as Agnes calls it. You must be able to see it from your window, as I can see yours from mine. It is always a comfort to me to be able to descry the light in yours; it is my beacon-light, my pole-star!"

Letitia said she should assiduously watch for the light in his casement, and think of him the more while she gazed. And so on, and so forth, as all lovers know.

The morning following the above conversation, which took place by the old wooden bridge in the Scaleby fields, an unexpected and rather curious event happened. The Mayor had scarcely taken his seat on the bench of the borough police-court, with John Turnbull and Ephraim Sleek, justices of the peace, beside him, when a ragged fellow was brought before them charged with vagrancy. Mr. Farrel, the chief constable—a pompous old man with white hair and beard—said the culprit had been found asleep in an outhouse, and that he would neither tell his name nor give any account of himself.

"Had he nothing to say at all?" asked Mr. Sleek.

"Not much, sir," replied the chief constable. "When asked who and what he was, he said he was 'a gentleman without means.'"

"I call that giving a very good account of himself," remarked Mr. Sleek, who was considered the humorous man of the bench. "Tell me, my good fellow, what is your name?"

The vagrant who was of one colour from head to foot, and that a dirty brownish ash, as though he had slept on the refuse of kilns and furnaces for the year last past, and had had during that space no near personal acquaintance with water—the only exception being the point of his nose, which was of right Bardolfian effulgence, and seemed to stand out from the rest of his person like the tall peak of a mountain when upon it rests the first roseate tints of the morning—the vagrant, thus addressed by Mr. Sleek, gazed first at the ceiling and then at the floor, as though considering what answer he should give; then looking at the speaker with a queer expression in his little grey eyes, he said—

"If you will pardon me, sir, I should prefer not to divulge my name. I am well connected, and it would give pain to my relatives to see my name in the police reports."

"It is something in your favour," replied Mr. Sleek, "to find that you have shame enough left to think of the feelings of your friends."

But how comes it that the same feeling has not kept you from the disgraceful condition in which you at present find yourself?"

"I trust your honour does not impute disgrace because of poverty," returned the vagrant.

"That depends," replied Mr. Sleek; "they very often—nay, I have no hesitation in saying in the majority of cases—go together."

"I am sorry to hear your honour so asseverate," answered the vagrant, with a wave of his hand. "It is hard enough to be poor, as I am at present, without the added bitterness of imputed disgrace. Misfortune, sir, comes alike to worthy and unworthy" (with a shake in his voice)

"How came you to be in such a position?" asked Mr. Sleek. "You seem to have intelligence, and to be not without education."

"I am thankful to say I have both" (with a proud gesture). "As to the wherefore of my present condition, that arises in part from my deafness, which stands greatly in the way of my calling."

"What is your calling?" asked Mr. Sleek, who kept up the colloquy—the Mayor all the time being a silent listener, while Mr. Turnbull slept.

At this question the vagrant's manner suddenly changed: he drew himself up, assumed a theatrical pose, and with a half smile in his cunning grey eyes, he responded—

"I am, sir, a vagabond by profession, otherwise a play-actor, at your honour's service."

"What!" exclaimed Mr. Turnbull, suddenly waking up, and putting his hand to his ear; "a play-actor, did you say?"

"A poor player, your honour," returned the vagrant.

"A player, indeed!" growled Mr. Turnbull. "We turn men into workers here. Don't you think a month on the treadmill would do you good?"

"Ah, sir!" (in a deprecating voice) "if you will allow me to say so, I have been on the treadmill long enough, having trod all the way from London, and with no shoes to speak of!"

"But how came you to be sleeping, as Mr. Farrel tells us you were, in an outhouse?" asked Mr. Sleek.

"Because I had no other place to sleep in" (sullenly).

"But why had you not?" persisted Mr. Sleek.

"Because, I suppose, Providence did not supply me with one."

"That, sirrah," put in Mr. Turnbull, in his deep gruff voice, "is talking irreverently of your superiors, and you must not do that here."

The player did not seem to comprehend.

"You must not be impertinent to the bench," the chief constable bawled in his ear.

"I think my answer was very pertinent to the question," replied the other.

"But you must not speak disrespectfully of Providence," returned Mr. Farrel, adding, *sotto voce*—"a vagabond like you."

Mr. Sleek turned to the Mayor, who sat with his hand to his brow as though to shade his eyes from the light. His worship listened to

what his colleague had to say, and then, addressing the vagrant, but without withdrawing his hand, said—

“Have you had to beg for your bread?”

The man drew himself up stiffly at the question, and answered proudly in the negative.

After another brief colloquy with the Mayor and Mr. Turnbull, Mr. Sleek, addressing the vagrant, said the bench had decided to look leniently on his case this time, and he would be discharged on condition that he promised not to trespass again.

As the gentleman without means was leaving the court, the Mayor leaned over the bench, and spoke a few words in an undertone to Mr. Farrel, who immediately afterwards went out.

When the few remaining cases had been heard, his worship again had a brief colloquy with Mr. Farrel, and then directed his steps towards Acacia Villa. Arrived there, he went into the library, and ringing the bell, inquired if there was anyone waiting for him. The butler replied that there was; there was a queer-looking man in the kitchen, who had been waiting about half-an-hour; he had been brought by a policeman. Mr. Softly desired that he might be shown into his presence.

On the way to Cuckoo Hill (Cuckoo Hill, with Cuckoo Road leading thereto, formed the aristocratic quarter of Hydeborough), the vagrant and the policeman had had some conversation together. The former had commenced by asking his conductor whither they were going. They were going to the Mayor's house, he replied; his Worship wished to see him there. Who and what was the Mayor? asked the vagrant. His conductor told him his name was William Softly, that he was a manufacturer, and reputed to be very rich.

Upon hearing his Worship's name, the gentleman without means uttered a little whistle of astonishment, but made no further sign.

When shown into the Mayor's kitchen, he sat down with a certain air of satisfaction, and looked about with conscious pride, as though he might have been a prince in disguise, or a prodigal prescient of the fatted calf.

Upon entering the library, he advanced a step or two towards the chair in which Mr. Softly was seated, and made what he intended for a profound bow; but his solemnity of mien and visage so ill consorted with his mean appearance and ragged attire, that the effect was extremely ludicrous. Having made his obeisance—such as it was—the vagrant advanced a step nearer the table, and placing one hand on his hip, while holding his hat in the other, he said—

“To what, may I ask, am I indebted for the honour of this interview?”

The Mayor, after a short pause and a little cough to clear his throat, replied—

“I thought I might possibly be of service to you.” Then, after another pause: “You appear to have been in better circumstances?”

“I have indeed; but misfortune—misfortune!” (with a shake of the head and a quaver in the voice.)

"But what brings you into this immediate—ahem!—distress? You have education, intelligence, even talents; at least, you appear to have."

The actor replied with a grimace, and a pressure of the hand to the region of his heart—

"I can only repeat—misfortune."

"In what way can I assist you?" asked Mr. Softly, rising and going to the window.

"By helping me to find a long-lost brother."

The effect of these words was such as to cause Mr. Softly to turn round quickly, and advance a step or two towards the stranger. After again examining him for a moment, he asked him—

"Who is your brother? What is his name? What is your name? You refused to give it to the police and to the Bench."

"My name is Jacob Softly," replied the man; "and my brother's is William Softly—do you know him? I heard that he had set up business in Hydeborough, and that is what brought me here."

These words were said in a manner and with an action as though the speaker had studied their stage effect. His attitude after they were spoken was that of the actor who knows that he has said an effective thing, and waits for the applause of the house. But his only auditor saw nothing of this incongruity. He was deeply affected, and going hastily towards the stranger, exclaimed—

"Jacob! Jacob! I am your brother! and you did not know me!"

"You my brother—my beloved brother William? Can it be? At last, after all my toils!" (sobs).

The brothers embraced each other affectionately.

"William's eyes were moist with tears, but he quickly recovered an outward calm. Not so Jacob; he continued to weep as though his very eyes were melting, exclaiming between whiles—

"The dear companion of my youth! At last! But how changed!"

CHAPTER V.

FATHER AND DAUGHTER.

The Mayor had recognised his brother the instant he set eyes upon him in the court. He had long wondered what had become of him; had from time to time made inquiries respecting him, but had been unable to learn anything about him from the time he deserted his wife and child, now some fifteen years ago, until they met, so oddly, as magistrate and vagabond. The elder found the companion of his early miseries but little altered in general appearance, though abundantly notched with years.

It had wrung the good Mayor's bosom to see his brother, the "little Jacob" of his youth, come so low; his heart bled for him; and he resolved, while listening to the colloquy between him and his brethren of the Bench, to do his utmost to redeem him, and to make

him again, not only a respectable member of society, but a man who could look to his "latter end" with a Christian's hope.

The questions he put to Jacob in the library were only designed to test him. He observed that, in spite of his sufferings, there still remained the old affectations and vanities. Still, he really had faith in his brother's talents, and hoped to turn them yet to good account; but, apart from this, he hoped and believed he might be the means of saving him, and that was his chief concern. He had prayed long and earnestly for the restoration of this "lost lamb"; and now that he had returned, albeit, in very un-lamb-like form, he regarded the event as an answer to his prayers.

It need hardly be said that Jacob Softly entered the library knowing his brother, and fully resolved to play a part. That was one of the younger brother's weakest points; he had always been trying to play a part that was not his own. As a boy, he had run away from home and joined a travelling theatrical company, and ever after his proclivities had been for the stage. He ranted, spouted, strutted, learned parts, and could think of nothing else long at a time. Twice or thrice after his youthful escapade he had appeared on the stage in some minor part, but never with much success. Nevertheless, the glare of the footlights had been enough to turn his wits, and he ever afterwards remained stage-struck.

In their unhappy youth, when William, though but a few years the senior, had to take the part of a parent to Jacob, he had learned to love him as one in such a relation only can love. For some years he almost wholly supported him, besides doing his best to procure him a fair education. But do as he would he never could induce him to settle down to any kind of steady employment; he might prevail on him to persevere at something for a few weeks, or even months; but in the end the erratic youth was sure to tire and give it up. When William saw how much Jacob was stage-bitten, he thought that perhaps the best course would be to let him have a thorough trial of his abilities in that line, but nothing satisfactory came of it. All that he got of his theatrical experiences was a taste for drink, and a greater disinclination for regular work. Finally, the brothers parted, not on the best of terms, and went their several ways, as we have seen.

It was shortly after this that William's accident happened, resulting in his cutting all connection with Homcaster for several years. When next he heard of his brother, it was to learn that he had married and deserted his wife and child.

It may well be imagined that the conference between the brothers was not without its painful side. Jacob was duly penitent for the wrongs suffered by his wife at his hands, and was abundantly grateful for the care taken of his child by his brother. He wanted to have Letitia called in at once that he might embrace her. This, William pointed out, would hardly be agreeable to the young lady in his present condition; whereupon, Jacob smiled sadly and wiped another well-spring of tears from his eyes; his hat being used for the purpose.

The noble-hearted elder brother was thoroughly taken in by the feeling exhibited by Jacob. He forgot that tears, smiles, penitence, gratitude, all the emotions, were at the command of that shallow nature. His heart, he believed, was still in the right place, and that he would yet prove a comfort to his old age. "Poor Jacob!" he said. "He has gone through sufficient to teach him wisdom, and as for means, well, God has given me enough for both."

So he told the wanderer that henceforth he must make his home with him; he would see if he could find him some light employment, just to keep him out of idleness; but in any case, whether he did any work or not, he should want for nothing so long as he lived, provided only he would settle down to a quiet respectable life, and think no more of vagabonding and play-acting.

Jacob was profuse in his expressions of gratitude. He said that was all he wanted, and he was sure he could be of use to his brother in many ways. William would find that he would have no occasion to regret his generosity, etc., etc.

There was only one other condition for which William stipulated. It was that Jacob should take no means to let his wife know that he was still living. She had married again, believing, as he honestly thought she did, that she was a widow, and it would be cruel to reveal the truth to her now, especially as he understood that she was happy in her second marriage. The vagrant readily accepted the condition.

Now let the reader imagine the first meeting of father and daughter. Fortunately, Letitia was out all the afternoon, she and Miss Goosey having been paying some visits together; and the first intimation she received that anything unusual had occurred was by seeing her aunt come to meet her at the door, and being led by her into the library, where her uncle was awaiting her.

During the few moments that Mr. and Mrs. Softly regarded her in silence, Letitia imagined half-a-dozen startling things that might have happened that were about to be communicated to her; but that a father had turned up for her was the very last thing that would have occurred to her: so true is it that it is always the unexpected that happens. She was astounded at the news, and was certainly by no means inclined to be pleased; what little she had heard of that estimable relative, her father, being anything but commendatory. But parents, like the other gifts of Providence, have to be accepted whether we will or not; and so Letitia had to acquiesce in this redundancy of relationship with the best grace possible.

She had not much time to speculate as to what her father was like; for while they were yet talking he entered the room. A transformation had been effected in his appearance. He had had a scrub, probably the first for months, and although not yet clean, he was tolerably presentable. Then he wore a suit of his brother's, of an olive brown; the only fault about which was that it was a little too long in the legs, William being somewhat the taller of the two.

The brothers presented a striking contrast. The elder was slim and erect in form, with regular features, blue eyes, and hair and

beard of snowy whiteness. His brow was high and narrow, and only a little paler in hue than his face. He looked very delicate—almost fragile.

Jacob was broader in build, with a face that presented not one single regular feature. His eyes were small and grey, but one was smaller than the other; his nose was bent to one side, and, as already intimated, of a rich roseate hue; his mouth was large and irregular; his beard and moustache, that had originally been brown, were streaked with grey, ragged, and “moth-eaten,” as Letitia’s maid described them. Then his complexion was that of a brickish or old copper-kettle hue.

Jacob entered with a stagey strut, becoming, as he thought, to the unwonted dignity of decent clothing and a clean shirt. He quickly espied Letitia, but made no advance towards her, until William, leading her to him, said—

“Do you not recognise your daughter, brother?”

The fact is Jacob had made one mistake, and was chary about committing another. He had met Mary as he came out of his room, and seeing a comely young woman with rosy cheeks and a neat little cap set jauntily on the side of her head, he advanced towards her on tiptoe, crying: “Ah, my child! my long lost child!” folded her in his arms before she had time to make him aware of his mistake.

Being now presented to his true child, and seeing in her a fair and lady-like girl, he was abashed. He bowed stiffly; then went forward a step and bowed again, murmuring something about “my child.” Letitia was so taken aback that she stood stock-still, and did not move until her aunt said—

“Have you not got a kiss for your father, dear?”

Then she stepped up to him, and selecting the cleanest spot on his cheek, impressed a dainty little kiss there. Jacob then unfroze a little, and taking her hands in his, dropped a kiss and a number of tears upon them. He always had tears at command, had Jacob.

The brothers were now left alone until dinner-time, when Jacob seemed to have quite recovered his spirits. He ate a great deal, shovelling it in for the most part with his knife, smacked his lips, and talked as incessantly as the demands of his unappeasable appetite would allow. He did not get on with his drink for a time, the claret not being to his taste, which had been formed on beer and spirits; but he did ample justice to what he called the “tippie,” when beer was set before him.

The butler watched him with amazement, and told his friends below stairs that “everybody would have enough of that beggar before they had done with him.” Mary mimicked his walk and his accents as he had advanced to embrace her; and altogether they had a good deal of fun out of the old fellow in the kitchen.

The dinner was hurried over quicker than usual, in order to curtail his potations, from which William apprehended danger.

During the evening John Henry Gander and Miss Goosey called,

and were, of course, greatly surprised to find Letitia in possession of a real, live father. What could it mean? John Henry suspected a joke. Whenever there was anything that John Henry did not quite understand he always suspected a joke. Maria, as soon as she could get Letitia aside, overwhelmed that young lady with questions, all equally unanswerable.

"Is he really your father, dear?" she queried. "Where did he come from? Isn't it very awkward his turning up just now? Is he at all like what you pictured him to be? Don't you think him very funny? Do you think you can love him?" and a score others of a similar purport.

To the last question Letitia answered that she did not know, but she supposed she should have to try.

Maria said she did not see that. If a father could not make his appearance at a proper time, she did not see that a girl had any call to love him. That was common sense, was it not?

Letitia considered it a very reasonable way of putting the point, and said so.

John Henry, who had been enjoying a little private confab with Jacob, happening to join the ladies at this moment, Maria was anxious to hear what he thought of the new-comer. "Don't you think he is very funny?" she asked.

The young man confined himself to the expression of his belief that Jacob was "a jolly old bloke." Mr. Gander's colloquial style, it will be perceived, was by no means classical, although he had received his education at the Hydeborough Grammar School, under a master who was nothing if not classical.

Maria wanted to know what were her *fiancé's* reasons for thinking as he did respecting the esteemed younger brother; but John Henry's sole response to her query was a broad smile and a suggestive shake of the head; whereupon Maria tapped him with her fan and told him he was "naughty" and "deep."

Maria's lover liked to be thought profound and discerning, and he had a laugh that was intended to inspire a belief in his depth and penetration; although in reality he was probably among the least profound of men. He was a young man with a large head and face, a long neck, and sloping shoulders; his cheeks were almost preternaturally puffed out, reminding one of the little cherubs in the corners of ancient maps; but he was very different to them in other respects, as he seemed to be endowed with more than the ordinary proportion of limb, which, on account of their awkwardness, appeared to be always in the way. His eyes were large and protuberant; Maria, in her tender moments, designated them "orbs," and described them as "expressive"; some would have called them "fishy"; they were green or grey of hue, according to the light they were seen in.

When John Henry had again gravitated to the side of the quondam "vagabond, otherwise play-actor," and the young ladies were left to themselves, Miss Goosey returned to the attack with another series of questions. Her whole art of conversation con-

sisted in asking questions. She was indeed a sort of vivified note of interrogation.

"What will Mr. Drupe think of your father turning up in this way?" she asked. "He won't like it, will he?"

Letitia shook her head dubiously, and looked almost disconsolate. It really did seem rather preposterous to be troubled with such a redundant relative at this trying time. It looked like an act of supererogation on the part of Providence, although Letitia did not say so in so many words.

The young ladies were now called upon to sing. Both of them had good voices; and Letitia, taking her seat at the piano, asked what she should sing. Jacob suggested "Tommy, make room for your Uncle;" whereat there was a laugh, which the proposer did not seem to understand. Instead of that once popular ditty, however, Letitia sang "Robin Adair;" and then Maria and John Henry sang a duet, of which Mr. Softly was very fond.

But before it was half finished Jacob was performing a nasal accompaniment on an organ of undoubted power.

CHAPTER VI.

JACOB'S ESCAPADES.

The next few days were very trying ones for the Mayor and his wife. They had to be on watch and ward all the time to see that "Brother Jacob" did not commit some indiscretion. That worthy, but undisciplined individual had hardly the faintest notion of restricting himself in anything. He ate till he could hardly walk; he drank as long as he could lift a glass to his lips, and had several times to be carried helpless to bed. When remonstrated with, he replied, in the most contrite terms, that he was sorry and would not again fall into error. But when his brother had some of the smallest of small beer got in for his especial use, the old sinner took umbrage and made no end of fun over it; averring that if that was a specimen of Hydeborough ale, he saw a good chance for starting a company to provide a stiffer brew, etc. The quantity put before him, too, was never sufficient, and led to several scenes. Once he asked Radley, the butler, if it was measured out to him as to a pauper. The next-day, with a joke at Radley's expense, because he did not replenish his tankard quick enough, he got up and went to the cellar himself.

The Mayor was gentleness itself to him, but his temper was, nevertheless, greatly tried; while as to his wife, she suffered tortures. After the first few days Letitia began to take her father in hand, and gradually found that she had a good deal of influence over him. But the task she had set herself—that of keeping him right—was not an easy one. She had to tell him when to go to bed at night, and when to rise in the morning; she had to insist upon his washing himself, and going out with clean clothes, etc.; in short, he had to be looked after like a wayward boy.

When he went out he had to be watched, too. For the first few days he got into endless scrapes, and came near falling into the hands of the police more than once. The Mayor, however, privately advised Mr. Farrel to instruct his men to have an eye on his vagrant brother, and to bring him home if found in mischief. This they did with eminent good-will, because, for one thing, they found their interest in so doing; and, for another, because they soon discovered Jacob to be, in the language of Mr. Gander, "a jolly old bloke." In short, he spent freely the money his brother allowed him for his pocket, and was "hail fellow, well met" with everybody.

But at the end of a fortnight his drinking bouts had been so frequent and his other lapses so many and so grave, that William felt himself obliged to have a serious talk with him. It resulted in the usual protestations of amendment, and for a week or more Jacob really seemed to have turned over a new leaf. Once he asked to be allowed to accompany the family to church, and sat the service out with commendable decorum, joining in the singing with a hearty good-will, if with little knowledge or voice, and nodding approvingly when in his sermon the preacher made a good point.

That night William was profuse in his acknowledgments to heaven for the beneficent change manifest in his brother's conduct. "He has at length"—he told his heart for comfort—"he has at length been snatched like a brand from the burning."

But there was no particular reason for thankfulness. No real change had been effected in the wanderer's character, nor was there likely to be any such sudden process as the elder brother imagined; but the quondam actor was willing, as far as lay in his power, to fall into his brother's ways, and thus, by pleasing him, advance his own interests. For Jacob saw that, if he kept anything like within bounds, there was a home for him, and an idle life to the end of his days; and his vagrantship had had enough ups and downs in life to value such a prospect.

It was with the view of showing his brother that he was cultivating a serious turn of mind that he asked to be allowed to accompany him when about to engage in public duties. The Mayor readily consented, thinking it might be a spur to his brother's ambition to see him exercise the high civic functions he was called upon daily to discharge.

The first occasion of the kind tried Jacob's patience, but he proved equal to the effort required of him. It was a meeting of the Town Council, and for five mortal hours he sat and listened to a discussion on sewage without once moving, except to straighten his back and pull up his collar when his brother rose to speak. But his patience was evidently sorely tried; for when the Mayor at length quitted the chair he hastily sprang to his feet, and with a cough to call the attention of the meeting, and an imposing gesture with his right arm, asked for permission to say a few words. The Mayor turned alternately hot and cold; but before he could interfere, Jacob was *in medias res*. He had gathered from what had been said, that the

town-sewage farm produced vegetables of gigantic proportions and sheep of monstrous size, but both were so rank that no one would buy them ; farmers even would not accept the vegetables for their cattle as a gift. What, therefore, the vagrant had to suggest was that the town should feed their paupers with them ; they were good enough, he said, for them. There was a laugh at the suggestion, and two or three councillors clapped their hands, which the orator took for a compliment.

The next day Jacob accompanied his brother to the police-court, and was privileged to sit at the end of the platform on which the magistrates had their seats. On this occasion, however, he did not come off with so much *éclat*. A dispute between a married couple came on for hearing wherein the wife, being the complainant, made out such a bad case against her husband that Jacob, who had listened to the woman's accusations with the greatest attention, suddenly exclaimed, addressing the stronger vessel—

“Well, you are a wretched scoundrel ! I'd give you three months, rough, not a day less ! ”

There was a hearty laugh at this amusing interruption, in which the accused joined. But when Jacob saw the eyes of the Bench upon him, and especially remarked the Mayor looking very red and stern, he suddenly collapsed, and was not tempted to interpose another remark. Moreover, in future, he took his lessons in the administration of the law in another part of the Court.

But the novelty of attending his brother about soon wore off, and he was taken with the fad of exploring Hydeborough, which had some pretensions to antiquity. The chief discoveries that he made, however, had reference to out-of-the-way inns and taverns, with the result that he frequently reached home in a state of extreme elation. One day he “sampled” (as he put it) so many different ales that his naturally enterprising spirit was roused, and falling in with an accommodating organ-grinder, he struck a bargain with him for the use of his organ and monkey for the afternoon. Having paid down a deposit for the loan, Mrs. and Miss Softly were presently surprised to hear from the grass-plat in front of the house the excruciating tones of a hurdy-gurdy, accompanied by the shouts of dancing children. But what was their astonishment to find that Jacob was the “organist,” who, when they showed themselves, took off his hat, and grinned and grimaced in the approved Italian fashion.

Mrs. Softly immediately ordered Radley to send away the children and bring Jacob into the house ; but before he could get to the door who should appear on the scene but the worthy Mayor himself. When he perceived what was the matter, an angry flush mounted to his brow, and he exclaimed—

“Jacob ! Jacob ! have you gone mad ? ”

But Jacob only grinned the more.

Mrs. Softly, seeing the state of agitation her husband was in, went and took him by the arm, and led him into the house. Meanwhile,

Radley cleared the garden of the rabble of children and got Jacob out of sight by the back way.

While the latter was recounting his adventures to the domestics in the kitchen, his brother was walking about the library in great distress. This last escapade was almost too much for him. To think that he, to whom propriety had ever been as the apple of his eye, should be subjected to such disgraceful proceedings. What would the people think of their Mayor? Other Mayors had been distinguished for their administrative ability, for their hospitality, for their public beneficence, for their learning even; he for his strict propriety in all things; and yet in the very year of his mayoralty, first his brother appears in the police-court as a vagrant, and then in the public street, before the eyes of all men, as an organ-man with a monkey!

William Softly ate no dinner that evening, and retired early to his room repining over the shamed decencies and outraged respectabilities of his adopted town.

When he rose in the morning, however, the worthy man's resentment was quite gone. He looked out of his window upon the glowing summer landscape, and felt somehow that, like the Nature before him, he must be all-tolerant. Then, observing the sinning Jacob in the garden, he went down and joined him. They walked together for some time, the younger strutting along with head thrown back and a self-satisfied smile, the elder with downcast eyes and troubled mien.

"When I saw you brought before me in the police-court," said the latter, resuming a conversation which had lapsed for a minute or two, "it was borne in upon me that God intended that I should take care of you. I did not flinch from the task: that you know, brother, painful as your position then was; nor will I, so long as God gives me His support; but, Jacob, do not make that task too hard. That is all I ask: do not make it too hard."

There was something pleading in the elder's tone, as though the other might have been the giver of bounty, and he the recipient.

"I will not," replied the vagrant, with the air of one who does a favour; "I give you my parole."

"I have a position to sustain," continued William, "and as you know, it is not a light one. I have not sought the position, and if my own inclination had been consulted I should have declined it, as being beyond my strength; but being in it, I must do my best."

"Ah!" exclaimed Jacob, interrupting, "you never were inclined to push yourself forward, William. I always thought I was better cut out for public life than you. It suits me; I thrive under it. No amount of responsibility would trouble me; I could take any amount of it, and not fret under it as you do. You would do well to take things a little easier, William, as I do; you would indeed."

William cast a passing glance at his brother, and then, again turning his look to the ground, shook his head sadly, as much as to say, "Ah! if I only could!"

What made this last folly of Jacob's touch the old gentleman all

the more was that it got into the papers—without any names being mentioned, it is true; but still the fact was there, and William had no doubt that, privately, every circumstance was known that the newspapers suppressed. In one respect, indeed, they improved on the affair—or, at least, one paper did—in stating that the amateur organ-grinder had collected a rich harvest of pence in certain streets through which he passed.

There was no truth in the assertion. Jacob had been too intent upon giving pleasure to Mrs. Softly and his daughter to linger on the way more than was necessary to amuse the troops of children that followed him, like another Pied Piper. But the very invention of the story was a matter of importance to the Mayor, who could not get it out of his mind. The fact was—and William had reminded Jacob of the incident—that once when they were boys, the younger had made fun of an old blind beggar who stood on one of the bridges at Homcaster, and that the old man in his rage had prophesied that the day would come when one of them should beg his bread as he did. The circumstance had never escaped his memory, and he had often wondered if his brother had fallen so low as to fulfil the mendicant's prediction.

It is to be feared that Letitia, seeing her uncle and aunt so grieved by these constant lapses and escapades, took her father severely to task, and read him many a lecture upon his shortcomings, from which he profited nothing. He generally laughed at her for her pains, and said he supposed he must not take it ill, because they all meant well, and they could not be expected to be as free from prejudice as one who had seen the world.

"But," expostulated Letitia, "you surely don't call it a prejudice to object to one's father or brother going about with a monkey?"

"Certainly I do," replied the unabashed Jacob. "Why should I not go about with a monkey, or a thousand monkeys for the matter of that?"

Letitia laughed; it was too ridiculous, she said.

Jacob also laughed.

"You are too preposterous!" protested the young lady, compelling her features to seriousness. "The idea of going about with a thousand monkeys! Who ever heard of such a thing? You will want to be king of the monkeys next!"

"And why not?"

"Why not? You provoking man!" (with a pretty stamp of her foot) "because your friends and your relatives would not like it."

"That is their fault," replied Jacob. "They should educate themselves to it: you can educate yourself to anything."

"You're positively incorrigible! Would I have had such a father if I could have helped it!" cried the young lady, with a defiant toss of her head.

"All the more reason for me to be thankful that the order of nature is the other way about, my dear," replied the imperturbable Jacob.

(To be continued.)

Poetry.

IN MEMORIAM.

W. P. B., DIED DEC. 9TH, 1884.

Down in the vale where all men go,
Beyond the gate which none repass :
Why did he go so soon ? alas !
The Ages say 'twas ever so.

So good he was, so staunch and true,
One might have guessed how it would be :
The gods are envious still ; ah me !
Why take they not the canting crew ?

They sing their psalms before your door ;
They bid you come and hear their prayers ;
They stamp you as the devil's tares,
If you but stand aloof their corps.

"Come walk with us, sit in our seats,
And learn our trick of tongue and face,
That for you counts in heaven as grace,
And every need of goodness meets."

So say they—act they ! are so good :
Oh, envious gods, why take them not,
And leave us here and there a blot
Of white upon the reeking mud ?

But, hot words sped, I still must own
Thou better art down in the vale ;
Thy duty learned, the task grew stale,
And thou art happier out of town.

I thought to know thee still full long—
To walk the ways of grace with thee ;
But—peace, regrets !—still comes to me
The resonance of a goodly song !

A. T. S.

It does not appear essential that in forming matrimonial alliances there should be on each side a parity of wealth, but that in disposition and manners they should be alike. Chastity and modesty form the best dowry a parent can bestow.—*Terence*.

Facts and Gossip.

A STORY of animal intelligence equal to any of those published in the *Spectator*, has been communicated to the editor of the *Revue Scientifique*, by Professor Fontaine of the Lycée at Versailles, and is corroborated in every detail by his companion in the adventure, the professor of mathematics at the same institution. During their vacation last autumn these gentlemen found themselves in Inverness. While going about the town, they noticed that they were followed everywhere by a beautiful spaniel, of which at first they took no notice. Attracted, however, by the animal's persistence, they looked closely at it, and found that round its neck was a small padlocked box, with an inscription asking for alms for some poor schools. The Professors are assured that the dog recognized them as tourists by their clothes, and as therefore likely to give willingly. However this may be, M. Fontaine drew a penny from his pocket, and was about to put it in the box; but the dog prevented this by holding its head down over the opening, and seizing the coin in its mouth with great quickness, ran away. A few minutes later they passed a baker's shop, and saw their collecting friend seated on the counter, and apparently enjoying to its heart's content a loaf which it had purchased for the penny! This remarkable story seemed to the editor of the *Revue Scientifique* to need confirmation, which was supplied by the following terse note from Professor Porchon, the other witness: "I add my evidence with much pleasure to that of my friend, M. Fontaine, with regard to the Inverness dog. I saw it refuse to allow a penny to be put in the box it carried, and taking the coin in its mouth, get on the counter of a baker's shop, there depositing it, and getting a loaf in exchange."

A DUMFRIESSHIRE correspondent reports that during a recent snow-storm, a lady residing in St. Mungo, Dumfriesshire, put down a plateful of crumbs to the starving wild birds. In a minute a flock of small birds gathered round the food, from which they were, however, immediately driven off by three blackbirds. Shortly afterwards a large blackbird appeared on the scene, and giving battle to those of his own feather, drove them off, and allowed the small birds to resume their meal. The blackbird kept guard for nearly an hour until the contents of the plate, of which he only took a small quantity, were consumed. This looks like a case of conscience in a bird.

IT is well known that in its development each new-born being passes through very much the same stages that his ancestors have been through before him. Even after birth the growth of the child's intelligence simulates the progress of the human race from the savage condition to that of civilisation. It has been shown by Preyer, and others who have studied infant development, that a faculty which has

been acquired by the race at a late stage, is late in making its appearance in the child. Now, reading and writing are arts of comparatively recent achievement. Savage man could reap and sow, and weave, and build houses, long before he could communicate his thoughts to a person at a distance by means of written speech. There is, then, reason to believe that a child's general intelligence would be best trained by making him skilful in many kinds of manual labour before beginning to torture him with letters; and the moral to be derived is, that primary instruction should be instruction in manual dexterity, and that reading and writing could be learned with pleasure and with ease by a child who had been fitted for taking them up by the right kind of preparation.

THE passive forces seem to be more generally transmitted than the active; nature than character. Indirectly, of course, the former is largely the result of the latter, and to say that nature is more capable of hereditary transmission than character may, after all, be reduced to the truism that character is more lasting in its effects when by being repeated by succeeding generations it becomes nature. There is, however, a general fashion of thought that assumes all things undesirable to be hereditary, and all admirable traits of character to fade with the individual who has painfully achieved them. Such a belief has no better foundation than many another. The world is bad enough, but it is nothing to what it would be were not good as well and as easily transmitted from one generation to another as is evil.

HERE are some of Mr. Davitt's observations on the physiognomy of his fellow-prisoners: "The common notion, so prevalent among the novel-reading and other portions of the public, that the criminal classes, or habitués of prisons, are all of a Bill Sikes or similar physiognomic stamp of character, is as untrue and misleading as would be the supposition that all people who go to church must be saints, or at least holy people. The cleverest burglars I have ever conversed with, as well as the most noted swindlers with whom I have been in forced association, might pass in society for members of quite opposite professions. The man-brute whom Dickens has portrayed, and whom the comic journals reproduce in their cartoons as the type of the most dangerous criminal order, is not as frequently met with in a convict prison as is generally believed. I have conversed in prison with over twenty, and have been for years a close observer of several other murderers, without being able to trace a predilection to that greatest of all crimes, either in the conduct or facial expressions of these individuals." Mr. Davitt appears to have been fortunate in getting among a superior class of criminals.

THE Anthropological Society of France recognizes four shades of colour in the eyes—brown, green, blue, and grey—each of them with five tones; but these may all be regarded as varieties of black, or

brown, and of blue. The dark eyes are by far the most numerous, and, according to De Candolle, in a recent paper on "Heredity in the Colour of the Human Eyes," there is a probability that this preponderance will increase until blue eyes disappear altogether from Europe. From a large body of statistics which he has collected, De Candolle finds that $88\frac{1}{2}$ per cent. of the children of parents both of whom have the same colour of eyes, follow their parents in this respect. The curious fact, however, emerges that more females than males, in the proportion of about 49 to 45, have black or brown eyes. Where the parents differ in the colour of their eyes, De Candolle finds that 53.9 per cent. follow their fathers in being dark-eyed, and that 55.9 per cent. follow their mothers in being also dark-eyed. In each generation of discoloured unions there is, therefore, an increase of nearly 5 per cent. in the number of the dark-eyed. "It would thus seem," says the editor of *Science* in commenting on this result, "that unless specially bred by concolorous marriages, blue-eyed belles will be scarcer in the millennium."

SINCE the era of electrical exhibitions began, every one has learned the danger of taking watches too near to electrical dynamos. A magnetized watch will run ten hours all right, then stop for two or three hours and go on, or it may stop a dozen times an hour, until it is de-magnetized by the application of garlic juice or some more expeditious process. An American watchmaker claims to have made a much more interesting discovery; namely, that it is not only an electrical atmosphere which "bewitches" a watch, but that the temperament of the wearer may produce the same symptoms. If the wearer be in low spirits, the watch loses; if the reverse is the case, it gains. Nervous ladies, to facilitate the diagnosis of their physician, would do well to wear their watches constantly, if it were only to act as a moodometer. The magnetism of the feelings in the American bosom must be much stronger than in England. American watches in English pockets are by no means so sympathetic.

IN an article on "Food and Feeding," the *Cornhill Magazine* says: "The sense of taste, which in the lowest animals is diffused equally over the whole frame, is in ourselves and other higher creatures concentrated in a special part of the body, namely the mouth, where the food about to be swallowed is chewed and otherwise prepared beforehand for the work of digestion. Now it is, of course, quite clear that some sort of supervision must be exercised by the body over the kind of food that is going to be put into it. Common experience teaches us that prussic acid and pure opium are undesirable foodstuffs in large quantities; that raw spirits, petroleum, and red lead should be sparingly partaken of by the judicious feeder; and that even green fruit, the bitter end of cucumber, and the berries of deadly nightshade are unsatisfactory articles of diet when continuously persisted in. If, at the very outset of our digestive

apparatus, we hadn't a sort of automatic premonitory adviser upon the kinds of food we ought or ought not to indulge in, we should naturally commit considerable imprudences in the way of eating and drinking—even more than we do at present. Natural selection has therefore provided us with a fairly efficient guide in this respect in the sense of taste, which is placed at the very threshold, as it were, of our digestive mechanism. It is the duty of taste to warn us against uneatable things, and to recommend to our favourable attention eatable and wholesome ones; and, on the whole, in spite of small occasional remissness, it performs this duty with creditable success. Taste, however, is not equally distributed over the whole surface of the tongue alike. There are three distinct regions or tracts, each of which has to perform its own special office and function. The tip of the tongue is concerned mainly with pungent and acrid tastes; the middle portion is sensitive chiefly to sweets and bitters; while the back or lower portion confines itself almost entirely to the flavours of roast meats, butter, oils, and other rich or fatty substances. There are very good reasons for this subdivision of faculties in the tongue, the object being, as it were, to make each piece of food undergo three separate examinations (like 'smalls,' 'mods,' and 'greats' at Oxford), which must be successively passed before it is admitted into full participation in the human economy. The first examination, as we shall shortly see, gets rid at once of substances which would be actively and immediately destructive to the very tissues of the mouth and body; the second discriminates between poisonous and chemically harmless foodstuffs; and the third merely decides the minor question whether the particular food is likely to prove then and there wholesome or indigestible to the particular person. The sense of taste proceeds, in fact, upon the principle of gradual selection and elimination; it refuses first what is positively destructive, next what is more remotely deleterious, and finally what is only undesirable or over-luscious."

Knowledge has the following paragraph:—"I learn from the current number of the *American Naturalist* that ignorance, bigotry, and superstition may flourish as rankly under a Republic as under the oldest European monarchy; and that the howl which was raised by the stupidest and worst-informed of our English 'Ministers of Religion' against the theory of Evolution is being re-echoed from the other side of the Atlantic. The Presbyterian body in the United States would seem to have dismissed Dr. Woodrow from his chair at the Theological School at Charleston; to have subjected Dr. Kellogg, of Pittsburgh, to 'disciplinary proceedings' for daring to proclaim this theory; and, in fact, to be driving what little intellect there is in their communion out of it."

THE editor of *Knowledge* has little right to complain; he pursues the same system, and damns the thing he is ignorant of. And that

is the way the world over. What we like we believe in, what we don't like, we would fain put down. What has been the treatment of Phrenology in *Knowledge*? and what would it still be? And yet how much does the editor know about the subject? Nothing. Pray don't get hot about intolerance, Mr. Proctor.

IN addition to the prize for the best Essay on Phrenology written by a young person under eighteen, Mr. Fowler offers a second prize of One Guinea for the best Essay on the "Utility of Phrenology," written by an adult. Competitive Essays must be sent in on or before April 25th, 1885. They must be written on one side of the paper only, and must not exceed eight pages of the PHRENOLOGICAL MAGAZINE. The successful Essay will be published in the PHRENOLOGICAL MAGAZINE, and, if thought good enough, in pamphlet form afterwards.

THE same conditions as to length, &c., apply to the Essays by persons under eighteen. In both cases an additional month will be allowed for competitors residing in any distant country, or in any of the Colonies.

Answers to Correspondents.

[Persons sending photographs for remarks on their character under this heading must observe the following conditions:—Each photograph must be accompanied by a stamped and directed envelope, for the return of the photographs; the photograph, or photographs (for, where possible, two should be sent, one giving a front, the other a side view), must be good and recent; and, lastly, each application must be accompanied by a remittance (in stamps) of 1s. 9d., for three months' subscription to the MAGAZINE.—ED. P. M.]

ITALY has a motive temperament, and has a clear, steady, strong mind, with great powers of endurance, and can be relied upon in times of danger and temptation. He is neither selfish, cunning, nor cruel; is a lover of truth and virtue; is sound in judgment, methodical in business and modes of living, and takes all conditions into account before he passes his opinion. He makes nice distinctions between error and truth, the natural and artificial; his judgment can be relied upon; he only talks when he has something to say, and is careful to mind his own business, and not meddle with that of others.

HERBERT has the head for a scholar or artist; has talents for drawing, and will be fond of machinery and all kinds of mechanical work, and would easily learn any trade. He should be thoroughly educated, and then follow the bent of his inclinations as to his pursuits, but he should be encouraged to study with reference to some special object. He will be as apt in learning as he will be in making

and drawing. Could make a superior architect, civil engineer, or literary man. Has rather too much versatility of talent, and will want to do too many things.

FREDERICK has a favourably-developed brain. It is sufficiently broad to give energy, and high enough to give a strong character ; he will early manifest a strong determined spirit, and a desire to do and think for himself. He will be very exacting of others, and have distinct ideas of right and wrong. The moral brain is favourably developed, and if carefully educated will make a high-toned moral man, and show a practical common-sense intellect.

J. D. W. (Swansea).—Your two photographs indicate a very distinct character. You have great intellectual curiosity, desire for facts and general information ; you have favourable talents for scientific knowledge, and are thoroughly practical in the whole bent of your mind. You are intuitive and quick to discern the difference between truth and error. You have a passion to study human nature ; you are highly ambitious, rather proud-spirited, and very firm and tenacious ; are not specially reverential or spiritual, but kind in disposition, free from cruelty and revenge. You have favourable talents for a speaker, and could sustain yourself in some public professional sphere of life ; should devote yourself to study, to general improvement, and to the education of others. You can exert a marked influence where you have a special object in view. Cultivate your speaking talent by all means.

D. E. (Tredegar).—You have more tenacity of constitution than you have vital power ; your muscles and osseous system stimulate you to vigorous action, while your lung power will not allow of much exposure. Strive to pursue a middle line, avoiding extremes of labour. Be content to do what you can without overdoing. Your energies are such that it would be easy for you to go to extremes of some kind. You love to study, think, investigate, and discover ; are better adapted to planning, thinking, organising, and superintending than you are to work that requires observation, experience, and memory. You are not copious in talking ; cannot remember words and names well, and your general memory of details and facts is not good. You have fair imagination, are quite fond of beauty and style. You have a high order of ambition, and are not satisfied until you have excelled others. You are particular in your friendships, and sometimes rather too exclusive. You cannot work well under the direction of others. With a proper education could manage a school. Encourage talking and public speaking, also entertaining company with anecdotes and past experiences.

D. D. (Cymro).—You have strong animal feelings and impulses, and possess a stout body and a strong, vigorous mind ; are up to the mark in capacity to enjoy yourself. You are not content with any ordinary sphere, nor will you cease to put forth effort until you are at the top of the tree. You should be noted for your vigour,

energy, ambition, aspiring spirit, loftiness of desire, originality of thought, capacity to criticise and present subjects in an absurd and ridiculous light. You love to reason and to pick flaws in the reasoning of others; are something of a wit, and could be successful in imitating and acting. You have favourable talents for a public entertainer. Will not be content in a quiet, retired life. The trouble with you is that you have too many ideas, are too abstract, and not sufficiently practical and scientific. You should marry a gentle, domestic woman for a wife. Discipline your imagination, and do not follow after phantoms and extravagant schemes.

W. R. (Leeds).—You have a working organization; are never more in your element than when you are putting forth effort and overcoming obstacles. You have a predominance of the motive and mental temperaments, but not enough of the vital for a good balance of organization. Your danger is in overdoing, straining yourself sometimes, and thus making a weak spot in your back or stomach. You have more than ordinary gifts; have favourable talents to lecture and entertain; are quick-witted, sharp, and pointed; definite and direct in your style of talking. You have a high sense of beauty and style; are very fond of oratory and everything highly-wrought. You are very positive; have great determination and presence of mind in times of danger, but you never know when you have done enough. You have apparently strong feelings of respect for the superior and sacred, and much kindness and sympathy. You are rather partial to children and animals. Your talents are literary and oratorical, and you will not be satisfied until you get into public life of some kind.

G. P. (Chester).—You are a fairly balanced man. Under favourable circumstances you will get through the world without many extremes. You are aspiring, anxious to improve, and become more and more elevated in tone of mind. You are not satisfied with sensual pleasures; you have other subjects to talk about than those of a material nature; in short, you have a moral cast of mind that must have considerable influence on your character. You are tenacious when you have made up your mind; are generally satisfied with your own opinions in matters; are not given to worrying; have not extreme caution, and yet are rather reticent, and prefer to listen rather than to talk. You are always interested in the study of nature, and treasure up facts as worth keeping. You are quite methodical, and particular how things are done. You may be quite apt and appropriate in your remarks, but not much given to general joking. You should be a little more free in conversation, and mix up with others with more familiarity.

H. B. N. (Belfast).—You are characterised for ardour, earnestness, and sincerity. Are particularly eager to become acquainted with new truths; have more than average originality of mind; are easily impressed with reference to what is going on around you. You are

improving in the development of your perceptive faculties, and are able to so cultivate them as to render you comparatively scientific ; while Causality being large disposes you to investigate and examine fundamental principles. You are not copious in speech, although inclined to be rapid. You have more power to acquire knowledge by observation and reflection than you have memory as applied to events or scholastic subjects. You are decidedly on the ascending scale ; your ambition is elevated ; you are strongly social and domestic, are decidedly sympathetic, and much interested in the welfare of others. Your strongest desire is to do good, and you ought to seek some position where you can be employed doing good. You have the spirit of a teacher, preacher, or advocate of some moral cause. Can engage with fair success in business, but your whole heart will not be in it as it will in some intellectual or moral pursuits of a public sphere.

M. D. (Butterknowle).—You have a narrow, high, and rather long head ; are open-minded, free from cunning and disguise ; are generally mild in disposition, but rather irritable ; are very firm, and quite tenacious of your own way. You are respectful towards superiors and sacred subjects, and are not a trifler at any time ; are a practical utilitarian man.—The lady has a reflective mind, and should be characterised for thought, judgment, general strength of intellect, and steadiness of purpose ; but not showy, quick of observation, or free in conversation.—The child is a mixture of the two, and has a better head than either, and if properly cared for and guided, will do honour to its parents, for its head is quite well-formed, and will early show a high tone of mind.

F. L. (Belfast).—You have a predominance of the mental temperament, with not a very strong hold on life. You should avoid extremes generally, get in love with yourself physically ; go a-fishing as often as possible ; give yourself time for physical growth and development. You have rather too much brain power, with not enough of it in the base or animal brain. If your health will allow, you can make a superior scholar, and show talents as a writer, musician, or speaker ; but it is all important that you give yourself as much chance to grow strong and healthy, so as to balance your powers, as possible. It would do you good to travel, knock about in the world, change air, food, and circumstances as much as you can. You have a great thirst for information of all kinds, and what you know will make you want to know more.

I PITY from my heart the unhappy man who has a bad wife. She is shackles on his feet, a burden on his shoulder, smoke to his eyes, vinegar to his teeth, a thorn to his side, a dagger to his heart.—*Osborne.*

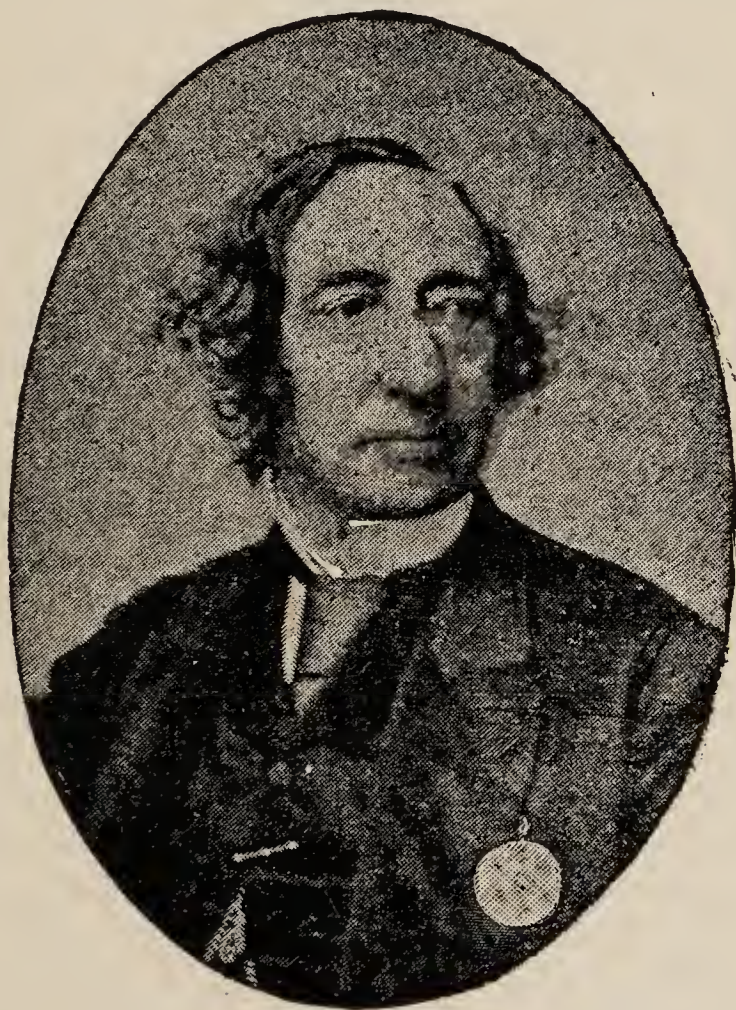
THE
Phrenological Magazine.

MARCH, 1885.

SAMUEL EADON, M.D., M.A. (Edin.).



YOU have a remarkable organisation, inasmuch as you have a very high degree of the mental and fibrous temperaments. You have more control over yourself, bodily and mentally, than the majority of men. You can work and think with comparative ease. There is less friction in all the operations of your mind than is



the case with many. You are characterised for great clearness of mind, distinctness of thought, and vigour of mental action. Your vital organisation is ample so far as giving health, tenacity, and recruiting power are concerned, but you have not so much vitality as to inconvenience you with extra

flesh. You have good breathing capacity, and an excellent quality of blood. You must belong to a better stock or class of people than average, because of your clearness of skin, distinctness of mind, and general power to accomplish.

The nervous system so effectually predominates as to give your mind the ascendancy, and it will be easy for you to gain reputation through your mental operations. From a lad you must have been disposed to think and study. You should have been characterised also for a high degree of excitability, for you throw your whole energy into everything you do ; you cannot be a moderate man in anything.

You are susceptible of strong conjugal affections ; are not in the habit of changing friends ; you keep old friends rather than form new attachments ; are almost clannish in your attachments. You could not love one and marry another. You are strongly attached to place, and dislike to be changing from one place to another : are a lover of the country. You are more distinct and concentrated in your mind than you are protracted and connected, hence your thoughts and feelings are clear and vivid.

You are full of resolution, have a great amount of courage, are not afraid to take hold of a difficult task. You are sharp in debate, and a difficult opponent to conquer ; yet are not destructive, revengeful, hard, or cruel. You are always satisfied when you have conquered.

You are more particular about the quality and flavour of your food than the quantity, and have a very distinct taste. You are not acquisitive in the general sense of that term. You prize property, and can take care of it, but you are not so devoted to property as many are ; it is your servant rather than you a servant to it. You are not cunning, have not an artful state of mind.

You more often say too much than not enough. You dislike all kinds of manœuvring and cunning actions. You are barely cautious enough to be successful, while you are almost a stranger to fear and timidity. One of the most stimulating elements of your mind is ambition ; you started out in the world with a desire to be number one. You have never allowed any one to excel you if you could possibly avoid it. Your sense of character is very great. You wish to be popular and a favourite ; are very sensitive to praise, naturally polite and easy in your manners. You did not naturally have a high degree of self-esteem, but were always more ambitious than dignified ; yet self-esteem in a professional way has quite a distinct influence because of its culture ; hence you love professional authority. You are capable of strong and

distinct will, which would manifest itself more specially as connected with your opinions and your convictions, but it does not make you stiff and unchangeable in your manners.

Conscientiousness is a very sharp, active faculty. You are a strict adherent to what you think is right. You cannot compromise ; are a severe critic on wrong-doings ; at times are almost rigid in your views. Thus far in life you must have been quite hopeful, happy, sanguine, buoyant in spirits, enterprising in thought, and almost venturesome in your efforts. You are not easily discouraged, and are quite apt to take sanguine views of the future. You are also very emotional, and have freedom of mental action as though you were inspired at times, for thoughts come to you without you going after them, and your mind opens to subjects with great freedom ; yet you think for yourself, and have a mind of your own. You are not confined to ceremony, have no idols, are no man-worshipper, and one day is about as good as another to you. Veneration does not trammel you in your opinions, but allows you to take free and advanced views of subjects. You could easily become radical and reformatory in your views.

Your sympathies do much towards mellowing your character. You are constitutionally tender-hearted, and easily enter into sympathy with those who are in want.

You have a fair degree of versatility of talent, which should show itself as a writer, a debator, a physician, or as one to contrive ways and means.

Your temperament with your Ideality, helps to give scope of mind, ready impressibility of thought, and power to magnify and embellish.

You have a very lively sense of the witty and ridiculous. Your mind sees and feels the force of a truth at once. You catch the motives of individuals in their remarks quickly, and present your own ideas in a very direct, pithy form. You are characterised for close and extensive observation, and you identify things in the detail. Your judgment of proportions and outlines is good. You also readily perceive the principles of force and resistance, and can balance and regulate muscular action well.

You are fond of flowers and colours ; are remarkable for your sense of arrangement, and are very particular how everything is done. You seldom get others to do things to your satisfaction.

As a scholar, or in your literary work, you should be remarkable for your power to present your ideas properly. You have also a favourable faculty to make up estimates and

calculations, to figure up profit and loss, and to keep correct accounts. As a student you have abilities in mathematics, and the exact sciences, as well as in literature. You remember places and enjoy travelling highly. Your general scholastic memory is good. You have a very active sense of time, and try to make the most of it. You are quick to detect mistakes in musical performances, have a good ear for music, and could have excelled in music if you had given your attention to it. You have great power of utterance, and a good command of language. You would easily learn to talk in a foreign language. You have all the qualifications to excel as a scholar or as a writer, in fact you are liable to be too prolific. You love to reason and discuss subjects, and are quick to take ideas.

You have a very apt faculty to teach, are specially able to criticise, discriminate, and analyse. You are metaphysical in your mode of reasoning, and are not satisfied with a common way of putting things. You are rather remarkable for your intuitions. You have forecasts of mind ; your power to read character or diagnose disease is great. You know people's thoughts, and what they are going to say before they say it. You know rather too much to get along comfortably with some people.

You are far from being satisfied with yourself or with the condition of society. You see too many imperfections, and too much carelessness of action. Few persons are in full sympathy with you because they cannot see as distinctly as you do.

By organization you are fitted for public life, and you would not have made a mistake if you had devoted yourself to a professorship or to public speaking. You also are favourably qualified for a writer, a critic, or for one to organize, arrange, and do things according to law and order. You would have made a good magistrate, but it would be next to impossible to get society to act according to your plans, for you have very distinct ideas of right and wrong.

L. N. F.

The portrait of Dr. Eadon exhibits a remarkable combination in the physical, mental, and moral developments; being endowed with a sanguine, nervous temperament, and a large proportion of the brain being in the perceptive and observing powers of the mind, combined with a large organ of Language and good reflective faculties. The profile shows still more strikingly the full development of the perceptive powers, giving a quick and ready facility in the acquisition of facts.

His great power of expression, and happy exposition of his views, united to his warm, social sympathies, would naturally prompt him to assume the office of teacher of other men. Many men are apt at acquiring knowledge who are wanting in the faculty of teaching others that which they know well. Few men possess happier combinations for the office of educator than Dr. Eadon. There is both tact and talent likely to arise from a cultivated brain thus organized. He is a man of action as well as a man of thought. The whole range of physical and mathematical science would be open to, and appreciated by, such a marked cerebral development. His linguistic and literary bias would give ready powers of verbal manifestation.

The career of Dr. Eadon singularly harmonizes with his organization, showing the relation between form, capacity, and character; while his intense feeling and vivid impressions would impart zeal and enthusiasm to his expositions of his convictions.

Dr. Eadon is one of a family of distinguished educators, one or more of whom—without one single intermission of time—have been educating the people of Sheffield for the long period of one hundred and twenty years—from 1757 to 1877.

Whatever Sheffield may yet become—owing to the generosity of Mr. Mark Firth, the founder of Firth College and splendid Board Schools—Sheffield will ever be under a debt of gratitude to the Eadon family for their steady perseverance in developing the mental powers of the youth of that busy town through a period of four generations of men. Many of the public men of Hallamshire were pupils of the Eadons—such as Mr. Plimsoll, the sailors' friend, the Parkers, the Ironsides, the Waterhouses, the Wilsons, the Leaders, the Turners, and a whole host of others, some of whom became surgeons, lawyers, or prominent manufactuers in the local trades.

At the age of twenty-one, the subject of our brief sketch entered himself as a student of the Edinburgh University. His academic course was a decided success, as he carried off two prizes, and other honours, during every session. At the close of the third year he was bracketted, with two others, as First Mathematical Prizeman, at the same was pronounced First Prizeman in moral philosophy. At the close of the fourth session, in 1834, he was declared Professor Wilson's Gold Medalist for mental and moral science; was graduated in honours as Master of Arts, and was elected Fellow of the Society of Arts of Scotland.

Dr. Eadon devoted himself to the education of the youth of Sheffield with great earnestness and devotion ; not in the usual mechanical and routine methods, but by lectures and verbal expositions, that gave life to his lessons, and awakened a keen spirit of inquiry among his pupils. His long talking labours of twenty years caused the vocal organs to give way ; next fits of coughing supervened, and the profession of teacher had to be abandoned, as a matter of necessity and conservation of life.

About this time occurred an event that gave a new field of employment to his active brain : his father, Mr. John Eadon, was seized with Asiatic Cholera—a malady he knew well, having been amongst it when it made fearful havoc in Edinburgh in 1832. The family medical man attended the patient, with consultations with Sir Arnold Knight, M.D., but they were powerless to relieve. This impotence made a strong impression on Dr. Eadon's mind. He felt he knew more than they on most subjects, but knew nothing of physic. He saw his father's life at stake, and he could render no help. He determined that henceforth physic should be the study of his life, and put his resolution into practice. Homœopathy, then coming into notice from its simplicity and certainty, attracted his attention. Having mastered the subject, Dr. Eadon graduated at the Hahnemann and Cleveland Colleges of America. He wrote largely in the journals of that day, and became editor, with Dr. Pearse, of the *Homœopathic Record*, and defender of the doctrine of Semetia. He finally settled down to practice at Banbury.

It is a singular fact that his father again had an attack of Asiatic Cholera—whilst passing along the side of a churchyard, inhaling the effluvia from a grave just opened in which a cholera patient had been interred a dozen years before. In this case Dr. Eadon attended his father along with Dr. Calvert Holland. A second time the old gentleman recovered. The last attack was as virulent as the first. Dr. Eadon applied his skill and experience—administered camphor, veratrum, arsenic, cuprum, and ipecacuanha in substantial doses. The patient was again restored.

After several years' success in Banbury, a medical practitioner purchased the practice. Dr. Eadon determined a second time to go to college, and became a medical student in the University of Aberdeen. The object was to see the old system of physic in full operation with his own eyes, to compare the two systems of physic. He went through the whole curriculum of studies and hospital practice, partly at Aberdeen, and partly at Glasgow. Like many others he

found his views and early impressions much modified, while the enthusiasm of his former days was not a little lessened. Nevertheless, the great curative law of nature remained as unshaken as ever.

We have not space to dwell on several phases of Dr. Eadon's progress, although they all show how closely his career illustrates the bias or tendencies of his organization, and the diversified powers of his mind. He could not remain satisfied with Homœopathy, and on the investigation of Dosi-metric Therapeutics, he adopted the practice, and has been remarkably successful, as we might expect would be the case with the man who could at sixty years of age become a student a second time, to discover the relation between the old and the new system of pharmacy. Some of his cases recorded in the *Journal of Medicine*, are exceedingly interesting, and seem as if the hand of genius had discovered "The Art of Prolonging Life."

Dr. Eadon has for some time retired from practice, and he is enjoying the evening of his days in a small village on the borders of Gloucestershire, where he occasionally wields his pen with his old emphasis when dealing with questions of the hour, or of more lasting importance. E. T. C.

CHARACTER AND ORGANIZATION.

THERE is great harmony between the characters and actions of men and their organization, for man is an organized being, and his organs indicate the primary elements of his nature; and the different organs of the body, in their influences on the mind, give man many of his peculiarities and sources of enjoyment.

The organs of the brain indicate the primitive faculties of the mind, while the organs of the body modify their action, and aid in giving them direction.

In this article we shall consider the influences of the organs and functions of the body on the mind, and shall begin with the inferior parts, and advance upwards to the highest organs of the body.

Character is two-fold in direction, as organization is two-fold, and consists of a physical and a mental direction—the upward and downward action and manifestation.

First, character as affected by the bodily organs—the physical, downward direction. The functions of the body

are subject to four general divisions, having their general influences on the mind, and are the nutritive and the circulatory, the locomotive and the nervous; and these are sub-divided—the circulatory into respiration and circulation; the locomotive into bones and muscles; the nervous into nerves of motion and sensation, and of mental manifestation.

Character, as affected by the mental powers, comes under four general divisions: the selfish and domestic feelings, the moral sentiments, and the intellectual faculties. These are subject to several sub-divisions.

We shall first consider the influence of the different functions and organs of the body as affecting character.

First the secretions. Where the secretions predominate, persons are easy, gentle, graceful, good-natured, pliable, and disposed to say "Yes" where no labour is required; are also disposed to believe and take for granted where inquiry can be avoided. Will love comfort, ease, luxury, soft cushions, low-armed chairs, and the corner of the sofa, feather-beds, retired, reserved places, and warm firesides; are rotund in motion, and rolling and swaying to and fro while walking; are easily fatigued, and want to be waited upon rather than wait upon others; one good turn from them deserves a dozen from that person in return. Persons of this temperament will sit down to enjoy the society of friends rather than walk or row a boat. Are adverse to hard work, desperate battles, long marches, long hours of work and little sleep, and object to small salaries and short allowances, and would much prefer to oversee and direct others than work and be directed; are more disposed to play on the violin than dance. As musicians they will have flexible, soft melodious voices of a soothing nature, and a gentle touch on the instrument. As orators they will have pathos, emotion, and enthusiasm; will awaken astonishment, sympathy, and pleasant feelings, and come under the name of sons of consolation, but will not awaken intellect or start inquiry; will prefer to read travels or have them read to them, and look out the places on the map, and imagine the rest, than to go and see for themselves. Will be content to let well alone, and not go far to get new ideas or ways of doing things; are easy and tolerant in their theology, and believe in a good and merciful God rather than in one of just ire and severity—one who makes great allowances for sins, and is mild in judgment.

Nutritive or digestive persons having a predominance of this condition of organization will have a fully developed abdomen, a large mouth and face and lower jaw, a good chin, and flesh under the chin. Their eyes will stand out with

fatness, and they will be on the look out for something good to eat and drink ; their skin will be well filled with fat rather than muscle ; their bodies will be heavy and wanting in elasticity, and they will seriously object to going up to the fifth story to sleep. Will delight in a plentiful harvest, and in seeing the orchards, vineyards, winepresses, gardens, and hot-houses full and loaded with the bounties of life. Those who have a predominance of this temperament will live to eat and drink, and fill up the cup of life and enjoy physical pleasure, and will therewith be content, and seek no higher pleasure, and know of none. When well-fed they are good-natured, and after dinner feel quite liberal, and promise much. Will always encourage a good cook and market, and delight to be where there is great excitement and much going on of a physical nature—such as bazaars, fairs, cattle-shows, horse-races, barbecues, oyster suppers, and aldermanic dinners, dedication of public buildings, statues, &c. They will drive the horse, take the toll, carve the beef, go to market, and cater to the appetites of others, fill the larder, and attend to the cooking. Are not fond of study, close reasoning, or plodding investigation, and will not seek confinement, seclusion, or detailed work. They will not be ambitious for glory, yet liable to brag how much they can eat, drink, and sleep, rather than how much they can endure work, and walk. Are rather timid and indolent, and inclined to animal pleasures, for the lower portion of the animal nature predominates. They are not self-sacrificing, tidy, clean, enterprising, or reformatory, and are more mindful of something good to eat and drink than they are of appearances. They will not work for posterity, but will make posterity work for them, by sending their children to work rather than to school.

The above remarks will apply more particularly to those who have a predominance of this temperament without culture.

This temperament, combined with the arterial, gives impulse. With the muscular, a love for an active life and for positive enjoyments. With the bony structure, it gives power of endurance. When combined with the nervous, there will be great power, great susceptibility, elasticity, and capacity to enjoy, suffer, or labour.

The thoracic includes the body above the diaphragm and below the neck, and embraces the functions half way between the lower animal nature and the highest nature of man ; including lungs, heart, and blood, giving a full, deep chest, round form, large neck, broad nostrils red and full, and a sandy complexion.

Persons with this temperament are warm, ardent, earnest, excitable, impulsive, and variable, but very positive for the time being, and anxious to come in contact with other warm, active, arterial people. They prefer an active life out of doors, and are not much given to close study or protracted thought, or long-spun sentences, but are on the side of agitators, orators, reformers, pioneers, radicals, if not democrats, and republicans.

Those who have all the thoracic powers largely developed have a love for a roving, unsettled, mountainous, or seafaring life, and desire to be generals, masters, managers of horses, and are disposed to trade, be jockeys, and do a bold, exciting, business; are fond of notoriety, and of doing bold, courageous deeds, and of fighting desperate battles on the spur of the moment. Are fond of the hunt and the chase, of election days, enthusiastic gatherings, and the paraphernalia of a battle-field. Such will have a strong hold on life, frequently living to be very old. As mountaineers they are superiors, and masters of those who live in the valleys. They are prodigal of life, strength, and money, when they have any special object in view, and if excited are liable to make great havoc when not necessary. When in good humour they are polite, attentive, caressing, and subject to strong, passionate love, with none too much self-control and self-denial.

Circulation has a three-fold influence. The food that is eaten and taken into the stomach is digested and converted into chyle, and that is taken up by the absorbent vessels and carried to the heart with the venous blood, and from there into the lungs, where it comes in contact with oxygen taken in by the breath, and becomes arterial blood.

The arterial system includes the heart and arteries. The blood as it flows from the lungs is conveyed to the left side of the heart, and from the left ventricle it is forced into every part of the body, and carries with it the nourishment from the stomach and the heat from the lungs, thus giving vitality to the body. Persons with this system well developed, are fond of active exercise—such as walking, climbing, sporting, being sailors, traders, keeping a stall in the market, being express men, hawkers, agents, auctioneers, and speculators.

The venous blood is what remains of the arterial after it has made its deposits of nutrition and heat, and it acts somewhat as a scavenger to clean the system of its impurities, and may be called bad blood. Those persons in whom the venous blood predominates have a great quantity of impure blood in their bodies, and where it is influential in character, it tends to make individuals cold, somewhat coarse

and rough in manner, conversation, and actions. They are not sympathetic, tender, or obliging.

Where the venous blood, and a strong bilious system act together, the person is exceedingly tenacious, and will have his own way, even at the expense of others, and can bear pain heroically, and has no sympathy with those who cannot.

Where the secretions of the liver predominate, and there is an abundance of gall, the person will be plucky, enduring, hard-hearted, intense, vigorous and concentrated in his efforts; can endure severe torture and surgical operations, and repeat the same severe task without signs of fatigue or pain, and are physical in their pleasures, and passionate in their love, and will not be refused. Are in sympathy only with those who administer to their selfishness; are unsociable and negative in their disposition, and can hate to desperation, and must take the lead, have authority, be obeyed, and have all subject to their will; are tyrannical, and strangers to delicate, tender, modest feelings. There are many such among the braves of the Aborigines of North America and border roughs everywhere. Their skin is rather dark, and they have dark hair and eyes, and heavy, forbidding countenances. They prefer to live alone, and a semi-barbarous life has attractions for them, and they are seldom seen in social gatherings or in highly cultivated society.

The osseous or bony structure gives the framework to the body. The bony structure indicates a great variety in quality and size. Some are coarse and porous, while others are compact and fine in quality. These various conditions of the bony structure have a powerful influence on character. They are both slow and strong in body and mind, and are patient and enduring; are thoughtful and practical; are prudent and slow to adopt new measures, or take things for granted. Are methodical and systematic, and good to organize and lay out work; are ingenious and given to inventions, and are steady, careful, penetrating, thoughtful, sagacious, and given to the study of the application of principles and physical movements, and are much more inclined to action than to conversation. They make Boanerges and sons-of-thunder kind of preachers, and become substantial revivalists, evangelists, surgeons, miners, builders, masons and stone-cutters; are domestic, fond of home and country, and will defend them to the last, and are not content without some land and cattle. They are true to nature and to their own feelings, and are easily understood, for they say what they mean, and mean what they say. Large-boned men are generally plain, open, frank-spoken

men, and if they are guided by right principles, they are reliable, true, and honest. They are not given to double-dealing and flattery ; are not deceivers, cunning, artful, crafty, or hypocritical, but they take sides one way or the other, and are positive in their opinions whether right or wrong. Limestone soil is favourable to bony growth.

Muscular : The muscles and tendons hold the frame-work together, and the more powerful they are, the more firm the structure and compact the organization. Those who have strong bones and muscles are generally self-possessed, have presence of mind, are not easily frightened away because of danger, but are ready to come to the rescue.

The muscular organization gives a full form, a hard muscle, compact build, a stiff neck, a strong back, and square shoulders. Such men are resolute, spirited, forcible, bold, positive, self-relying, and daring. Men with this organization row the boats up the Nile, fight the battles, bore tunnels, dig coal-pits, work in the foundry, and make large machinery. Such men have strong tempers and throw their whole force into what they do, and are liable to be despotic when in authority. They are rigid in their religious views, and positive in their theological opinions, and they believe in a hell as well as in a heaven, in a devil as well as a Christ, and they can hate as well as love ; can fight desperately for their cause, and sometimes for the love of it. They work hard, eat heartily, and make a finish where they begin, and leave marks and chips behind them.

Bone and muscle men do the work of the world, are in all the great labour enterprises of the ages, and deal in heavy machinery, as they are the human machinery of the world, while the arterial and digestive systems furnish the heat and propelling power.

Brain and mind : The nerves of the brain are so conditioned as to be the instrument of thought and feeling, and all mental operations. Persons with a predominance of brain power will be characterized for mental manifestation, and for clearness and distinctness of thought and feeling.

Nerves extend from the medulla oblongata to the eyes, nose, ears, tongue, &c., and give sensation. The nerves of motion and of sensation extend from the spinal column downward to every portion of the body, making all parts susceptible to action and sensation. They are the telegraph lines to inform the mind as to the conditions of the body, and are servants to obey the commands of defence and protection.

Persons whose nerves of motion and sensation are highly

susceptible are much alive to the condition of the body and all that affects it. They are capable of great enjoyment and suffering, feel pain acutely, are easily disturbed by little annoyances of the body; are kept awake by a gnat or mosquito, and are quick in motion, and prompt to remove any annoyances causing pain or unpleasantness.

Persons having a predominance of brain and nerve power will show strength and vigour in that direction. The head will be larger in proportion to the face; the forehead will be high, smooth, and well filled out; the eyes will be bright, the speech distinct and rapid; the motions will be quick and direct, and the person will be wide awake and given to study and thought. Such persons are artists, inventors, editors, authors, and musicians. They are very susceptible, impressible, and easily educated and developed in body and mind, and are alive to all surroundings; are sharp-minded, penetrating, and quick to decide. They are the educators of the world, and do the thinking, writing, and gathering and promulgating of news, and are at the head of the civilized world. The brain and nerve power of man are at the top and the climax of the physical form and add great importance and value to man. He is the recipient of more mind in proportion to the increase of good brain and nerve power. The higher the brain is in the forehead and coronal portion, the more intellectual and moral force and influence there will be. Large brains, if healthy and well sustained by the body, have an advantage over small brains, however good the quality; yet large and very heavy brains or heads are not always in good working order. A young man recently came into my office with a shilling in hand, and a head $26\frac{1}{2}$ inches in circumference to know what he was best fitted for.

Persons with a predominance of the brain and bone power will be strong and steady-minded, and exert a regulating, controlling influence over others, and will do the hard thinking and working of the world, and get hold of remotest ideas on the subject, and thus become leaders; will take everything by storm, will use strong and forcible language, not to be misunderstood, and are not easily driven from their purpose or position.

Persons with a predominance of the brain power and arterial blood will be excitable, impulsive, oratorical, radical, reformatory, agitators, fond of sensational subjects, and delighted to be where there is the most going on, in the centre of news, and where they can read the latest telegraphic news.

Persons with a predominance of brain and muscle will be industrious, and constantly doing, for they cannot be idle.

They are the Jehus and Marthas of society. Neither the Lord nor the devil chooses lazy men to do their work, but brain and muscle men and women. Such men are to the community like the poker to the fire, the bellows to the furnace, and pitch to the flames.

Persons with a predominance of the brain, digestive, and secretive powers will be full of animal life, very susceptible to physical pleasures and mental sensation, fond of nature, flowers, scenery, music, oratory, sagacious animals, and wealth, and are generally conservative, aristocratic, and willing to let well alone.

Where there is a predominance of the bony, muscular, and arterial organization, there will be a turbulent spirit, subject to extremes, difficult to control, beyond ordinary restraint, and not willing subjects to law and order. They take delight in doing the hardest kind of work, and in living in dangerous places and on volcanic ground.

It is easy to infer that when we act according to our organization we are the most natural and easy ; yet, as one great object to be accomplished in living is to develop, harmonize, and perfect our organization by cultivating the weaker and properly guiding the stronger powers, so as to bring every power up to the highest possible standard, and thus secure the greatest possible enjoyment, and the highest degree of power and influence, it is not only necessary for us to understand our strength and weakness, but to know how to live so as to bring about the desired result.

To man was given the power to control, subdue, and utilize the earth, and to develop, control, perfect, and utilize himself. The former he is doing rapidly and successfully, and bids fair to bring all the elements of the heavens and all the qualities of matter under his control, and utilize them for his good. In the latter, in the most essential parts, he has signally failed ; for although man has developed his strength and skill and become learned, yet the earth is full of disease, violence, and crime. Man's greatest strength and skill thus far have been spent in trying to subdue, conquer, and rob his fellow-man. While the passions, the pride, vanity, and selfishness of man are in full force, there is as yet but little moral light and power and spiritual vision manifested upon the earth. If the salvation and sanctification of man depends entirely upon himself his chances are very slim. Even with the aid and inducements of heaven, and a perfect pattern and example of manhood and divinity combined, with offers of eternal salvation from the effects of sin and disobedience, on the easy terms of repentance, submission, and obedience

to divine law, man is making very slow progress in the upward direction. The number living with reference to another and higher life, subduing and controlling their physical natures, and cultivating an acquaintance with their higher powers, and learning to obey the laws of their own being and of their Creator, are greatly in the minority. L. N. F.

THE HEALTH AND LONGEVITY OF THE JEWS.

IN these days, when sanitation claims a large share of attention, and when questions relating to the public health are canvassed and discussed on all sides, it may be of service to ask what lessons are to be learned from the diet, habits, and customs of the Jews. It is not generally known that their health and longevity are superior to those of other races, a fact which has been noted by careful observers from early times in this and other countries. An experiment, extending over thousands of years, has been made as to the sanitary value of certain laws in the Mosaic code. The test has been applied in the most rigid way, and if it had failed at any period in their eventful history, their name alone, like that of the Assyrian and Babylonian, would have remained to testify to their existence as a nation. The three deadly enemies of mankind—war, famine, and pestilence—have at times been let loose upon them. They have stood firm as a rock against the crushing power of oppression, when exercised at the call of political or religious antipathy. They have been pursued with relentless persecution, from city to city, and from one country to another, in the name of our holy religion. Restricted as to their trade, singled out to bear the burden of special taxation, confined in the most miserable and unhealthy quarters of the towns where they were permitted to dwell, living in the constant fear of robbery without redress, of violence without succour, of poverty without relief, of assaults against their persons, honour, and religion without hope of protection; in spite of woe after woe coming upon them, like the waves of a pitiless sea, they have not been broken to pieces and swallowed up, leaving not a wreck behind. No other race has had the fiery trials that they have gone through; yet, like the three Hebrew youths in the furnace, the smell of fire is not found on them. To-day their bodily vigour is unequalled, and their moral and mental qualities are unsurpassed.

How has it happened that, after being compassed about

for centuries with so many troubles, they have at the present time all the requisites that go to form a great nation, and are, in numbers, energy, and resources, on a level with their forefathers in the grandest period of their history? It is not enough to say that all this has come to pass according to the will of God, and that their continued existence is owing to His intervention on their behalf. No doubt it is a miracle in the sense that it is contrary to all human experience, for no other nation has lived through such perilous times of hardship and privation. But as it was in the wilderness so it has been in all their wanderings down the stream of time; the miracle was supplemented by the use of means, without which God's purpose regarding them would have failed. The blessing of long life and health, promised to them by the mouth of Moses, has not been withheld.

The following statistics, for which I am indebted to the kindness of Dr. A. Cohen, who has collected them from different sources, will serve to prove their superiority in respect of health and longevity. In the town of Fürth, according to Mayer, the average duration of life amongst the Christians was 26 years, and amongst the Jews 37 years. During the first five years of childhood the Christian death-rate was 14 per cent. and the Jewish was 10 per cent. The same proportion of deaths, it is said, exists in London. Neufville has found that in Frankfort the Jews live eleven years longer than the Christians, and that of those who reach the age of 70 years 13 are Christians and 27 are Jews. In Prussia, from 1822 to 1840, it has been ascertained that the Jewish population increased by $3\frac{1}{2}$ per cent. more than the Christian, there being 1 birth in 28 of the Jews to 1 in 25 of the Christians, and 1 death in 40 of the Jews to 1 in 34 of the Christians.

These data are sufficient to verify the statement that the Jews are endowed with better health and greater longevity than Christians. It will therefore be inferred that some peculiarity exists which gives them more power of resisting disease, and renders them less susceptible to its influence. In virtue of this property their constitution readily accommodates itself to the demands of a climate which may be too severe for other non-indigenous races. Take as an example the statistics of the town of Algiers in 1856. Crebassa gives the following particulars: Of Europeans there were 1,234 births and 1,553 deaths; of Mussulmans 331 births and 514 deaths; of Jews 211 births and 187 deaths. These numbers afford a remarkable illustration of the "survival of the fittest."

Their unusual freedom from disease of particular kinds has been often noticed, and amounts nearly to immunity from

certain prevalent maladies, such as those of the scrofulous and tuberculous type, which are answerable for about a fifth of the total mortality. Their comparative safety in the midst of destructive epidemics has often been the subject of comment, and was formerly used as evidence against them, on the malicious charge of disseminating disease. At the present day, and in consonance with the spirit of the age, the matter has come within the scope of the scientific inquirer, with the view of ascertaining the cause of this exceptional condition.

A peculiarity of this sort must lie in the nature of things in the distinctive character of their food, habits, and customs. Their more or less strict adherence to the requirements of the Mosaic law, and to the interpretation of it given in the Talmud, are familiar to all who come in contact with them. To this code we must therefore look for an explanation of the facts under review; and here it may be stated that no prominence is given to one set of laws over another. They all begin with the formula, "And the Lord spake unto Moses, saying," thus making no difference in point of importance between the laws of worship and those of health. These latter, therefore, carried with them the sanctions of religion, and were as much a matter of obligation as any other religious duty. It will thus be easily seen how the interweaving of the several laws relating to health and worship had the effect of giving equal permanence to both, so that as long as the one was observed the other would be in force. Though many of the details might appear arbitrary, a fuller knowledge of sanitary science has revealed a meaning not recorded in the sacred text. Moses, who was versed in all the learning of the Egyptians, was evidently acquainted with the laws of health, which he embodied in his code under divine direction.

This part of the Mosaic code is mainly concerned with details relating to food, cleanliness, the prevention of disease, and the disinfection of diseased persons and things. The Jews observe in eating flesh-food the great primary law, which was given to Noah after the Flood (Gen. ix. 4): "But the flesh with the life thereof, which is the blood thereof, shall ye not eat." It was enforced in the Mosaic dispensation (Lev. xvii. 10), under the penalty of being cut off for disobedience, and in the Christian era was confirmed at the Council of Jerusalem (Acts xv. 20), when the Apostle James, as president, gave sentence that the Gentiles who are turned to God should abstain from blood. To this day the animal (whether beast or bird) is killed with a sharp knife in such a way that the large bloodvessels in the neck discharge the

blood most freely, and so drain the flesh to the utmost extent possible, and as an additional precaution the veins, which in certain places are difficult to empty, are removed before the part can be used as food; so that it would appear every needful measure is adopted to prevent the ingestion of the forbidden fluid. On this account game that is shot is not eaten by the orthodox Jew, as the blood is retained by that mode of death.

Before the slain animal is pronounced kosher, or fit for food, a careful search is made by experts for any evidence of disease. These men have to satisfy the Shechita Board, which takes cognisance of these matters, that they have a competent knowledge of morbid structures before being authorised to affix the official seal, without which no meat is considered wholesome. That this practice is far from being unnecessary may be gathered from the fact that in a recent half-yearly report presented to the board the following particulars occur:—Oxen slain, 12,473, kosher, 7,649; calves slain, 2,146, kosher, 1,569; sheep slain, 23,022, kosher, 14,580. These numbers show that out of 37 beasts slain 14 were rejected as unsound, and not allowed to be eaten by the Jew. The less-favoured Christian, not being under such dietary restrictions, would have no hesitation in buying and consuming this condemned meat. It is even alleged that a larger proportion of diseased animals than is here stated is exposed for sale in the Metropolitan Meat Market, and used as food by purchasers of all classes. Whether this be so or not, the fact remains that the Jewish portion of the community have the sole benefit of arrangements specially designed for the maintenance of health. This state of things demands urgent attention, and has surely a claim prior to many other subjects which occupy the time of our legislators.

The Mosaic law, in forbidding the use of blood as food, gives as the reason that the blood is the life. It follows, therefore, if the animal be unhealthy its blood may be regarded as unhealthy. But as the blood may be diseased without external or even internal evidence such as is open to common observation, the total prohibition of it obviates the risk that might otherwise be incurred.

Modern science has discovered in the circulation of diseased animals microscopic organisms of different forms, each characteristic of some particular disease. They are parasitic in their nature, growing and multiplying in the living being, though they are capable of preserving their vitality outside the body. Some, like the bacillus, which is supposed to cause tuberculosis, may even be dried without losing their

vital properties, and on entering the system be able to produce the disease proper to them. Others will develop in dead organic substances, but increase more abundantly in living structures. They are very plentiful in the atmosphere of certain localities, and settling on exposed wounded surfaces, or finding their way into the lungs and effecting a lodgment in the blood and tissues, they generate, each after its kind, specific infective diseases. When the blood becomes impregnated by any special organism, a drop may suffice to propagate the disease by inoculation in another animal. The mode of entrance of these morbid germs may be by inhalation, by inoculation, and by the ingestion of poisonous particles with the food. Any person living in unhygienic circumstances, and whose system is from any cause in a condition suited for the reception of these organisms, cannot safely eat meat which may contain them in the blood. In the splenic fever of cattle, for instance, which is communicable to man, these germs are exceedingly numerous, and the same may be said of the other specific febrile diseases. Eventually there is a deposit of morbid material in the tissues, where the process of development goes on till a great change in the once healthy structures is effected.

With the light derived from recent investigation we are able to understand the wisdom and foresight of the Mosaic injunction as well as appreciate its supreme importance. The Jew, like the Christian, is exposed to the inroads of disease when he breathes an infected atmosphere and eats tainted food, provided he is susceptible at the time to the morbid influence, but he is protected by a dietary rule at the point where the Christian is in danger. The Jew who conforms to the law of Moses in this particular, must have a better chance of escaping the ravages of epidemics than those who are not bound by these restrictions. This hygienic maxim goes far to explain the comparative freedom of the Jewish race from the large class of blood diseases.

The examination of the carcass is also necessary with the view of determining the sound or unsound condition of the meat. At one time it was doubted that the complaints from which animals suffer could be communicated by eating their flesh, but the evidence of eminent authorities has definitely settled the question. Such bovine diseases as the several varieties of anthrax, the foot-and-mouth disease, and especially tuberculosis, are now believed to be transmissible through ingested meat. It has been proved that the pig fed with tuberculous flesh becomes itself tuberculous, and the inference is fair that man might acquire the disease if sub-

jected to the same ordeal. This last disease is very common amongst animals, and is now recognised as identical with that which is so fatal to the human race. It is considered highly probable that the wide-spread mortality caused by this malady is due in a great degree to the consumption of the milk and meat of tuberculous animals. That the milk supply should be contaminated is a very serious affair for the young, who are chiefly fed on it. The regular inspection of all dairies by skilled officials is imperatively necessary to ward off a terrible and growing evil; just as a similar inspection of slaughter-houses is demanded in the interests of the meat-eating portion of the community.

Temperance is a noteworthy feature in the habits of the Jews. Their moderation in the use of alcoholic drinks is deserving of the highest commendation. Very rarely are they rendered unfit for business by over-indulgence in this debasing vice. In no class of Jewish society is excessive drinking practised. The poorest, in their persons, families, and homes, present a marked contrast to their Christian neighbours in the same social position. The stamp on the drunkard's face is very seldom seen on the countenance of a Jew. He is not to be found at the bar of a public-house, or hanging idly about its doors with drunken associates. His house is more attractive by reason of the thrift that forms the groundwork of his character. Domestic broils, so common an incident in the life of the hard-drinking poor, are most unusual. When work is entrusted to him, insobriety does not interfere with the due and proper performance of it, hence his industry meets with its reward in the improvement of his circumstances. This habit of temperance amid abounding drunkenness, more or less excessive, is probably one of the causes of the protection afforded to him during the prevalence of some epidemic diseases, such as typhus, cholera, and other infectious fevers. His comparative freedom from the ravages of these terrible complaints has been chronicled by observers, both mediæval and modern, and is now a subject of common remark. The latest instance of this immunity is furnished by the records of the deaths from cholera in the south of France, where it is affirmed that out of a considerable Jewish population in the infected districts, only seven fell victims to the disease, a fact which ought to receive more than a passing notice in the interests of humanity.

Another point that may be mentioned is the provision made by the Jewish Board of Guardians for the indigent poor. It has been said that no known Jew is allowed to die in a workhouse. When poverty, or sickness involving the

loss of his livelihood occurs, charity steps in and bestows the help which places him above want, and tides him over his bodily or pecuniary distress. The mother is also seasonably provided with medical and other comforts when her pressing need is greatest. In this way they are saved from the diseases incidental to lack of food, and after an attack of illness are sooner restored to health than the majority of the poor, who linger on in a state of convalescence little better than the ailment itself, and often sink into permanent bad health from the scanty supply of the necessary nourishment which their exhausted frames require.

In enumerating the causes which have made the Jewish people so strong and vigorous, particular mention must be made of their observance of the Sabbath. This day was appointed for the double purpose of securing a set portion of time for the worship of God, and of affording rest to the body wearied with its six days' labours. The secularising of this holy day in the history of the French nation has demonstrated the need of a day of rest, and the wisdom of its institution by a merciful Creator, even before there was a man to till the ground. Obedience to this primeval law, renewed amid the thunders of Sinai, and repeated on many subsequent occasions by Moses and the prophets, is still held by the Jews to be as strictly binding on them as any other religious obligation. Of the physical blessings derivable from keeping the Sabbath day they have had the benefit for many long centuries when other nations were sunk in heathenism and ignorant of the divine ordinance made to lighten their labours and recruit their strength. In Christian countries where the Sunday is kept sacred, or observed as a holiday, another day of rest in addition to their own Sabbath is obtained, thus fortifying them against the crushing toil and nervous strain of modern life. The loss accruing from this enforced abstinence from business worries is more than counterbalanced by the gain in nerve power with which periodical cessation from any harassing employment is compensated. This is doubtless one of the factors which have helped to invigorate both mind and body, and to develop in them those high qualities for which they are justly distinguished.

To sum up—the longevity of the Jew is an acknowledged fact. In his surroundings he is on a par with his Christian neighbour. If the locality in which he dwells is unhealthy, he also suffers, but to a less degree. If the climate is ungenial, its influence tells on him too, but with less injurious effect. His vigorous health enables him to resist the onset of disease to which others succumb. These advantages are for

the most part owing to his food, his temperate habits, and the care taken of him in sickness and poverty. No doubt he is specially fortunate in inheriting a constitution which has been built up by attention, for many centuries, to hygienic details. His meat is drained of blood, so that by that means morbid germs are not likely to be conveyed into his system. It is also most carefully inspected, so as to prevent the consumption of what is unsound, hence his comparative immunity from scrofulous and tuberculous forms of disease.

How can the benefits which the Jews enjoy be shared by other races? In regard to food, whatever prejudice may stand in the way of draining the blood from the animal, it ought surely to be done when there is the least suspicion of unhealthy symptoms; but there can be no doubt about the urgent necessity for a strict supervision of our meat markets, so as to prevent the sale of diseased food. Legislation ought to make such regulations as will render impossible the continuance of an evil which, by oversight or otherwise, is dangerous to the general health. Temperance is a virtue within the reach of everybody, and is now widely practised by all classes, and the gain in improved health will soon be apparent in the lessening of ailments due to drunkenness.

UNSUCCESSFUL MEN.

MR. J. WEBB, of the Church Road (Leyton) Board School, has written the following letter to the editor of the Leyton local newspaper. It sufficiently explains its own purpose; and we think it of sufficient interest to find a place in the pages of the PHRENOLOGICAL MAGAZINE. Mr. Webb is an ardent phrenologist, and as a schoolmaster has had abundant means of testing and applying its principles. Mr. Webb is also an able writer and lecturer on the subject.

DEAR SIR,—Your remarks in “Notes by the Way” in Saturday’s *Independent*, to the effect that a lecture in your columns on “Unsuccessful men” would “well repay perusal,” as it sparkled with epigrams like the following: “Men are born Originals, and die Imitations,” and “Social Failures are the Awkward Squad,” led me to peruse this same lecture, which I did with much regret that the lecturer so little understood the truth about human nature.

“Men are born Imitations and die Originals” would be nearer the truth. “Social Failures” are very often “Social Successes” would be equally true.

In fact, the lecturer, to a certain extent, contradicted himself respecting the first of those "epigrams," when he said what he did about men being omnibuses "in which their ancestors ride." Yes, they carry the marks of their ancestors both as inside and outside passengers. Education and external circumstances in time modify the marks, and in rare cases apparently obliterate them. The result is, *the man himself becomes an "original."* That is my explanation. It is for you and your readers to judge which of the "epigrams" is the truer.

Again, some of the best men that ever lived belonged to the "Awkward Squads."

The man who can withstand a bribe, who can speak the truth at an "inopportune" moment may be very "awkward." He may lose office and so-called "friends," and so far as the public is concerned he may appear a "Social Failure," but is he? Certainly not. He is a *success*. Instead of not rendering the commonwealth any service, he renders it the highest service.

Children are born with the peculiarities of their ancestors, and so far are imitations. Men are not "born," surely. The lecturer made a point of this when he jocularly intimated that a German had said that men should be "particular in the selection of their parents."

I now arrive at the great error displayed by the lecturer; he made light of phrenology, and tried to combat it. He ignominiously failed. These are his words: "They used to say that phrenology would do this. Phrenology stood outside and argued from the architecture to the tenant, but education entered the house, looked on the mysterious tenant face to face, and assured society that a new, strange shape, had come from the hand of God. The more men were educated, the more would their personality come to light. When men were properly educated, there would be no awkward squad of society. In that day society would be like a king's crown, in which each jewel was set with care, and each added to the splendour of the whole, and all men, from the greatest to the least, were in their just place, free, contented, and happy." What a climax! And what is the real truth? Simply this: Phrenology does not *argue*, but is the only science that teaches us to *see* into the "house" and "look at the mysterious tenant," and assess him as to character and ability, and does not, like the "education" of the lecturer, confine itself to the astounding announcement "that a strange shape has come from the hand of God." What a calumny on education! What a mistaken idea of phrenology! Phrenology does not argue, it sees. The more we study phrenology the more we study the personality of men, and the more a man is educated the less his personality—that is, his character is modified by his education.

I am, on behalf of phrenology, prepared to give the lecturer a challenge.

If a committee of Leyton gentlemen be formed, I will agree to put the lecturer's assertions to the test. I will meet him on any

platform, and we will prove to an audience the value of phrenology in describing "personality," by which I suppose the lecturer means character and ability of persons. I will take an hour in publicly describing some six or eight persons chosen by the committee, and all unknown to myself, and the lecturer shall have an hour to prove that education can do what he says it can do. He shall take what course he likes to prove his statements, and I will base the value of phrenology merely on the descriptions of persons placed before me; or I will "argue" the question with him if the committee think best, and I think I can find more "arguments" in favour than against it; but I hold it is not a matter of argument, but of examination and experiment. You may argue for ever as to whether sand and sugar will dissolve in water; but you can readily find it out by trial. Moreover, the lecturer admitted that "every man came into the world with particular gifts and special endowments or qualities, capable of doing special work. One man is born an artist, another is a born merchant, another a born preacher, another a born mechanic," and to excite the mirth of his hearers, he ventured to say what I doubt, "another a born policeman." He denied that people are "born fools." He said *they* are "self-made men." Surely such "epigrams" are not in accordance with facts. A fool is certainly as much a "born fool" as a preacher is a "born preacher."

The lecturer, moreover, thought that a baker who could make a telescope, or a butcher who could make a steam-engine, were in their wrong "callings." He would deny all intelligence respecting optics, steam, and mechanics to the baker and butcher. What a wilderness this world would be were men compelled to walk and think in one groove only! No one knows when a fact in science will spring into special importance, and surely for the good of the country it is well that knowledge on any and every subject should be as general as possible.

Surely it is not the place of an opponent of phrenology to lay such stress on special aptitudes, much less for a minister of the Gospel to confuse his hearers by saying in one place, "To the young people he would say, recognise from the beginning of life the guiding hand of God; acknowledge Him in all thy ways, and He shall direct thy paths," and "But still society must assist itself in this matter, for the being a saint was not a sufficient guarantee of success in every direction, and showed that Christianity was no guarantee that a man was in his right place, or understood his business. The grace of God was as likely to make a man a good fiddler as a good merchant."

You see, Mr. Editor, I object to the lecturer making such a muddle about what is "successful," or otherwise, and assure your readers that if he had given attention to the study of phrenology he would have obtained such information as would have given him the key to the whole subject.

Yours truly,

5, Belgrave Terrace, Leyton.
January 26th, 1885.

J. WEBB.

WOODEN MAGNETS TO CURE DISEASE.

A CURIOUS example of the force of imagination is reported from Philadelphia. Dr. George C. Harlan, surgeon to the Wills Ophthalmic Hospital in that city, in the current number of the *Medical News*, reports a curious case, showing the great influence of the mind upon the body, and the beneficial effects of a wooden magnet upon both. A young Philadelphia woman, Lizzie D. by name, applied at the Polyclinic, Thirteenth and Locust Streets, for relief from a disease of the tonsils. She was treated by Dr. Solis Cohen. Her disorder was attended with hysteria, and, like all hysterical people, the idea of being doctored filled her with delight. Shortly after her initiation, the nervous symptoms became more and more marked, and she was transferred to the care of Dr. Mills, the well-known neurologist. Five or six weeks previously she had had pleuro-pneumonia, and after that paralysis attacked the arms. This was cured, but the disease manifested itself in the legs and feet. Besides this there was a numb feeling in the lower part of the body, and twitching on the right side of the face, similar to that seen in St. Vitus' dance.

Dr. Cohen applied a Charcot magnet in front of the ear. To his amazement the spasms on the side of the face touched by the magnet were greatly lessened in frequency and extent. It was evident that the cure was the result of imagination. After that she was attacked with eye troubles. At first there was no defect other than headache after the prolonged use of the eyes, and some shortsightedness, but at length the right eye became, apparently, entirely blind, and muscular spasms of the most violent character disturbed not only the eye, but the face and neck. She was sent to the Eye Hospital, and treated by Dr. Hansell. After several examinations, the Charcot magnet, that had proved so efficacious in the hands of Dr. Cohen, was applied to the defective vision, and with the most astonishing result. After many applications, it occurred to Dr. Harlan that it would be a good idea to try the effect of unmagnetized iron of the same form and appearance as the magnet. A wooden "magnet" was procured, with iron tips, to give the metallic impression to the skin. It was placed in the drawer where the original Charcot instrument had been kept, and the patient was thoroughly ignorant of its character. Before it was applied it was noted that the pupil of the right eye was widely dilated, as in diseases, and was perfectly rigid when exposed to a bright light.

There was twitching of the muscles of the right side of the face.

The application of the wooden magnet had a wonderful effect. Shortly after the painted wood was applied with much seriousness to her head, the twitching of the muscles stopped, and the face assumed its normal appearance. Gradually the pupil of the right eye became of the same size as the other and freely responsive to light. The wooden magnet had triumphed!

Dr. Cohen a short time ago had a case where the wooden magnet proved its efficacy. A patient of his fell down, and thought she had dislocated her elbow-joint. She was treated for that by a practitioner called in the emergency, and he discharged her with a stiff arm, which he said he was unable to straighten. Dr. Cohen examined the arm, and found no dislocation at all. He asked her to report at the surgical department of the Polyclinic for verification of his opinion. She called, and Dr. Steinbach noted extreme spasm of the biceps, the tendons being like whip-cords. Dr. Cohen applied a wooden magnet, and the spasm relaxed at once.—*Scientific American*.

THE HYDEBOROUGH MYSTERY.

A TALE OF A GREAT CRIME.

BY CAVE NORTH.

CHAPTER VII.

JEROME FANGAST.

IN the midst of all this irritation there was one source of consolation to Letitia. She could tell her troubles to Pennyfold Drupe, and ask his advice in all her difficulties. Whether followed or not, it was always pleasant to receive; and then the fact of her needing advice made it incumbent upon her to break through the rule they had made not to meet clandestinely. Next to making such a rule, the pleasantest thing is to break it. Every other day at least Letitia found it necessary to meet her cousin as he came to town, or else to send a note to him in the Cow Market, asking him to call at the house. It was not that his advice was so much better than anybody else's, although, as has been sufficiently intimated, the young chemist was more than commonly endowed with intelligence; but he had such a happy way of giving it. What lover has not?

Pennyfold was induced to consent to these rendezvous for another reason. Since Jacob Softly's arrival upon the scene he had made his formal visits to Cuckoo Hill less frequent, thinking his uncle would desire as few witnesses as possible of the painful domestic

scenes which were now of almost daily occurrence. In this he was somewhat mistaken, for Mr. Softly would have been thankful to any one who would have helped to entertain his brother and thus keep him from those acts of folly which were perhaps more the result of a misdirected than of an evilly-disposed mind. This he learned one evening when he accidentally met the Mayor walking home after presiding at a public meeting. The old gentleman reproached him gently for staying away, and said—

“I want my friends to come all the more, because they can do my brother good, and he can do them no harm.”

Pennyfold's heart jumped with pleasure at the prospect of being able to enjoy the company of his beloved without restraint; but the next moment he reproached himself with the deception he was practising upon so good a man. His conscience smote him hard, and the longer he dwelt upon the subject, the more uneasy he became. Still, that reported conversation between his uncle and aunt, and the dread of being debarred from all intercourse with her whom he considered to be more to him than life itself, troubled his sense and made a coward of him. In the conflict between duty and pleasure, too, he found a certain amount of satisfaction in the fact that the advent of the father somewhat complicated the relationship, and made it a question for consideration to which father—the natural or the adoptive one—Letitia was in filial duty most bound. But it was desire that gave weight to the doubt, not reason.

The first time that Pennyfold paid a formal visit to Acacia Villa after the conversation referred to with his uncle, he succeeded in awakening a deep interest in Jacob. He was telling John Henry Gander about some recent doings at a “New Shakspere” society that had been formed in the town; and the sometime actor—whom the bare mention of anything dramatic caused to prick up his ears—manifested so much interest in the conversation, that Drupe gave him a detailed account of their readings and recitals, their criticisms, their idolatries, and all the ins and outs of recent Shakespearian studies. The young man described with the zest of one who was fully alive to everything of an intellectual nature going on in the town; but he possessed a strong vein of fun, and there was a flavour about the narration that suggested a humorous eye to the foibles of the members.

The recital had the effect of awakening all Jacob's old zest for the drama. He recounted his experiences on the stage, described his favourite plays, and declaimed some scraps and fragments that still clung to his memory. Mrs. Softly and Letitia had never found him before so interesting and intelligent; and when the Mayor came into the drawing-room from the library, where he had had visitors of his own, it was not without pleasure that he saw his brother engaged spouting some shreds and patches of a play with exaggerated gesture and grimace.

Jacob was so excited about the “Shakspere” Society, that Pennyfold was engaged a few days later to take him to one of its meetings.

It was quite a pleasure for the young man to do so, for the very natural reason that he was willing to make a friend of the vagrant, whom he wished to make his father-in-law. The assembly was composed of about a dozen sentimental-looking young men and half as many ladies, with a sprinkling of older men, for the most part odd-looking specimens of humanity. One of the latter ran to Pennyfold and his companion the instant they entered, exclaiming—

“You did not come to our field meeting on Thursday, Mr. Drupe.”

“I could not spare the time,” pleaded the chemist.

“We missed you very much, I can assure you,” replied the other. “We never do much at these meetings unless you are present; you are *facile princeps* in natural history and botany, you know, and we others are such duffers. But we had our revenge.”

“Had you? How?” asked the young man.

“Because we were uncommonly strong in ladies. You don’t know what you missed. The tea, too, was excellent—never better; we spent more than two hours over it. You should have been there. You’ll come next Thursday, won’t you? You must. Perhaps your friend would like to come with you.”

Pennyfold introduced Jacob: “Our worthy Mayor’s long-lost brother, Doctor. Dr. Gribble, one of our best-known medical practitioners, Mr. Softly.”

Dr. Gribble bowed and held out his hand and was extremely glad to make the acquaintance of the Mayor’s brother. Jacob made his best theatrical salute.

“Our young friend is our only local botanist of note,” said the Doctor, tapping Drupe on the shoulder.

“Dr. Gribble,” returned Pennyfold, “is one of our best authorities on archæology.”

“You flatter me,” replied the Doctor, with a smirk.

“Not at all,” said Pennyfold.

“You are very kind. But it is quite true I have given a great deal of attention to archæology and kindred subjects—kindred subjects, though still only a dabbler—a dabbler. Pray, Mr. Softly, are you related to the Softly’s of Grubshire?”

“Not exactly,” replied Jacob, “not exactly—they are more related to us; that is—”

“Oh, I see,” returned the Doctor, smiling and nodding, as though he perceived a joke. “Very good! very good!”

Dr. Gribble hoped, if Jacob should be staying long in Hydeborough, that he would do them the honour to join their Naturalists’ Society. They would be extremely pleased to have him as an honorary member.

“Any benefits?” asked Jacob.

“Oh, yes, many,” replied the Doctor. “Outings once a week, nice company, tea; all that kind of thing, you know. Then some of our members know a lot about botany, the animal kingdom, and that sort of thing, you know.”

"I was once an Ancient Buffalo myself," put in Jacob.

"Yes! were you though?" replied the Doctor; then, fancying he saw another of Jacob's facetious touches, added: "Very good! very good!" and laughed.

"You ought to have been with us," reiterated the antiquary, turning to Drupe. We made some interesting finds. I had a splendid instance of mimicry, splendid. I saw a bit of dirt on an old wall; it looked like the dropping of a bird; I was going to put my finger in it, when it flew away. Wonderful, wasn't it?"

"A moth probably," observed Pennyfold, with a smile.

The chairman now took his seat, and the meeting was called to order. A gentleman in holy orders read a paper entitled, "Shakespeare as an Entomologist," in which the writer inferred from the mention the poet makes of flies, moths, etc., that he was a practised entomologist. Some discussion followed, and Dr. Gribble told his "mimicry" story, at which some wondered, and some smiled.

Another essay was read on "Shakespeare as a Necromancer," and then, as the time was getting on, the chairman asked someone to volunteer to prepare a paper for the next meeting, the gentleman who should have occupied the chief portion of the evening, having been unexpectedly called upon to leave town. There was a short pause; no one seemed inclined to volunteer an essay; whereupon the chairman, addressing a young man seated near to Mr. Drupe and Jacob, said—

"Won't you oblige us, Mr. Fangast?"

Mr. Fangast shook his head, but it was done in such a way that it seemed to say: "Won't you ask me again? Pray press me."

The chairman did so, and the members all tapped on the table in token of approval; whereupon Mr. Fangast wrote a few words upon a slip of paper, and handed it to his neighbour, saying: "Please pass that to Mr. Sandy."

Mr. Sandy cast his eyes over the paper, and announced that Mr. Fangast would read an essay at their next meeting on "Shakespeare's Fools." The announcement elicited hearty applause, for it was known that Jerome Fangast, if he was not very erudite, could be extremely funny when he liked.

After the meeting broke up, Dr. Gribble introduced Mr. Fangast to Jacob: "Of the Fangast's of Norfolk," he said; "A good old family of Flemish origin."

Pennyfold having company by the high-road, took that way home, leaving Jacob and Fangast, whose homes lay in the same direction, to go together. They had not gone many steps ere they discovered that the night was very close, and that they were both thirsty. A drink was suggested; both were willing, and the "George" was near. It did not take much of the "nappy" to set Jacob's tongue wagging; consequently before Fangast bade him good-night at the gate of Acacia Villa, he had drawn from the quondam vagabond and play-actor a pretty full record of his life, together with a statement of his hopes and prospects. Moreover, Jacob had insisted that his

new friend should call and see him at home, so that he might introduce his daughter to him.

"She is a spanking fine girl," he told him; "I should like you to know her, and I am sure you will like her."

Fangast was nothing loth; indeed it had been his desire for a long time to make the acquaintance of Miss Softly. He had been greatly struck by her beauty; and adding this to the report about her expectations as the niece of William Softly, he had come to the conclusion that Hydeborough offered few as good "catches," and none better. All these desirable qualities combined in one person had created within the breast of Jerome Fangast something akin to love, if not the real passion itself.

But unfortunately the young man had hitherto been precluded from pushing his suit. The door of Acacia Villa was inexorably closed against him so long as William Softly lived. The reason was this: Fangast had once been caught, with several others, in a foolish youthful escapade, and had been obliged to answer for his conduct before the magistrates. William Softly happened that day to be on the bench, and he deemed it to be his duty to read the young man, who was proved to be the ringleader, a severe lecture; which Jerome took with such ill grace that he subsequently issued a lampoon—or had a hand therein—in which the venerable Justice of the Peace was held up to ridicule.

The worthy magistrate was naturally much incensed by the attack, and the annoyance thus caused, together with the conviction arising from the circumstance, raised in his mind an invincible repugnance to the young man.

Hence, although Jerome told Jacob nothing about these matters, he hailed the acquaintance as a ray of hope, and being a young man of resolution, he determined to profit by it to the utmost.

CHAPTER VIII.

RIVALRY.

Jerome Fangast lost no time in improving his acquaintance with Jacob, and as he was an agreeable companion, the latter took to him amazingly, and was soon almost inseparable from him. His brother thought the acquaintance showed some of the perverseness which had somehow always characterized Jacob's relationship to himself. Still, as Fangast had, since going into business, been gradually growing in public esteem, and as his worship had, moreover, nothing special against his character, except that he was a man of no steady religious principles, he made no particular objection to the acquaintance beyond saying that he should have preferred to see him select his friends among men of more established reputation, and of an age more in keeping with his own. He did not even make known to Jacob the circumstances that had occasioned his dislike; that episode Jacob presently learned from Fangast's own lips, and with a colouring that told greatly in his own favour.

"You see I did not mind his administration of justice, but I could not put up with his preaching," was the young man's concluding comment.

"He does preach," said Jacob; "he sometimes preaches at me. It comes of his having lived all his life in one town; if he had seen the world a bit he would be different; but there's the difficulty, you see; while I've been learning to know the world, he's been and made a fortune."

"Which you and your charming daughter will spend, eh, old man?" replied Fangast.

Jacob laughed. He knew that his brother's will was made in favour of his daughter. By that instrument she was to receive two thousand pounds on her marriage, and the bulk of his fortune on her uncle's death, after deduction of a certain sum yearly to Mrs. Softly, should she survive him, during her lifetime. Jacob made his friend acquainted with these dispositions, and added that his brother had promised to append a codicil in his favour.

"The old fellow's daughter will be rich," thought Fangast.

"Letty will be a great catch," said the vagrant, as though he read his companion's thoughts.

"Yes; and for that reason will run the greater risk of making an unfortunate marriage, because she will be sought after for her money rather than for herself."

"Stuff!" said Jacob. "A girl is what her money or any other advantage makes her; and if a man loves her money, he loves her, because it goes with her. Don't you think you could love a girl—Letty, for instance—all the better for a bit of money going with her?"

Fangast evaded the question. "If," he remarked, "I really loved a girl, I would marry her whether she had money or not."

"That's all right," said Jacob; "but you would be a fool to fall in love with one without money!"

Fangast's unspoken reply was that he did not intend to commit such an act of folly; indeed, he had fully made up his mind that he was deeply, madly in love with Letitia; and like many another taking unlaidd eggs to market, he did such a profitable trade that he saw himself presently able to retire from his actual business, and launch into ambitious fields, the limits of which he could not at present define.

Fangast's actual business, be it said, was that of an auctioneer. He was in partnership with one Glibb; having entered the latter's employ as clerk, he had so speedily made himself master of the business, that Mr. Glibb, who was getting old, readily accepted an offer of partnership, glad to be relieved of much of the drudgery of the concern; for although Fangast counted barely a third of the Psalmist's period, he could not only sell anything from a caul to an ox, as well as his master, but he had likewise all the more intricate and annoying details of the office at his fingers' ends.

The junior partner in the firm of Glibb and Fangast possessed a

ready tongue and a sharp wit, and was known throughout the town as an off-hand spouter, reciter, and singer, always primed for any occasion. In appearance he was tall and shapely, and would have been comely enough in feature but for a too-narrow jaw and a disproportionately long chin, for which nature had as yet provided no sufficient hirsute covering. He owned a prominent nose and fairly good grey eyes. The latter, although by no means short-sighted, he had the affectation of hiding behind eye-glasses. His mouth was perhaps a little too large, but that did not matter a great deal ; it was good for his calling.

Jacob soon became so infatuated with this rising young tradesman that he was never long at a time out of his company ; he even accompanied him on his journeys about the county in his dog-cart to sell my Lord Foxholme's sheep or Farmer Plaidout's effects ; and was, on one or two occasions, allowed to knock down a few inferior lots, greatly to his delight. Nothing gratified the poor younger brother so much as to be seen and heard of men.

Of course in all this attention bestowed upon the vagrant, Fangast was paying his court by proxy to Miss Softly, and it did not fail to have an effect. Jacob was for ever talking in his daughter's presence of his friend Fangast—of his parts, of his growing wealth, of his influence, and of a thousand and one good gifts besides. It was for ever : "Mr. Fangast says this," or, "My friend Jerome says that." No one in Hydeborough dressed like him ; none spoke like him ; none acted like him. The young auctioneer was shallow Jacob's phoenix.

This unending talk about one man, and that in the highest terms of praise, had its natural consequence in making Letitia curious to see the paragon ; and the knowledge that for some youthful escapade—an act of harmless fun, as Jacob put it—he was precluded from visiting the house, did not tend to lessen her curiosity.

Jacob Softly was one of those beings who, no sooner do they learn that a certain thing is interdict, than they at once become possessed with a burning desire to bring that thing about. The knowledge, therefore, that his brother would have deprecated any acquaintance betwixt his niece and Fangast put him on the itch to make them acquainted. That by constantly dwelling upon the subject he at length hit upon a means of effecting his purpose need hardly be said ; by persistent scheming one may do almost anything. The method he lighted upon was so simple that it would have suggested itself sooner but for the circumstance that when one begins to plan a certain thing, it is always the most cumbrous processes that get worked out first. Hence, probably, the fact that the original drafts of machines are invariably the most complicated, and that the process of improvement is one of simplification only.

The method of introduction that Jacob devised was to take Letitia with him to one of the Shakespeare Society's meetings, when Fangast was to speak. If the young lady was not greatly edified by what she saw and heard, she was greatly amused ; and the introduc-

tion of Fangast coming on top of the amusement, predisposed her very much in his favour.

She told Miss Goosey after the meeting that she thought he was "rather nice"; to which Miss Goosey replied that she did not like him a bit, adding that he would be much better favoured if he did not look so much like a bishop.

"Why like a bishop?" asked Letitia.

"Because he has such a big mouth. Have you not noticed what big mouths bishops always have?"

Letitia replied that she had not observed that peculiarity; in fact, she had not seen many bishops.

"But I have," said Maria, "and they all have big mouths."

"Perhaps the Queen selects them according to the size of that organ," suggested John Henry.

"Then the Queen ought to know you," was Maria's quick answer.

John Henry laughed. He liked to be sat upon in that way by his sweetheart; it showed her spirit, and he liked a girl of spirit.

After this meeting several others were effected, for there was no lack of societies in Hydeborough. It should be said that Letitia had no idea of the object for which her father took her out, and regarded the inevitable meeting with Fangast as accident merely. Had she seen that it was her father's scheme to bring her in contact with the man her uncle disapproved of, she would have deemed it her duty to be less compliant.

Meanwhile, Pennyfold Drupe, who was well aware of Jacob's infatuation for Fangast, began to suspect his design and naturally enough to feel uncomfortable. The young chemist and the auctioneer had been schoolfellows, both of them having entered and left the Hydeborough Grammar School about the same time. But though well-acquainted, they could hardly be called friends. There had always been something so antagonistic between the natures of the two, that they never could form a real friendship for one another. Pennyfold had always been of a quiet, retiring disposition, so gentle, indeed, that he obtained at school the sobriquet of "Miss Pennyfold"; but those who presumed so much on his gentleness as to play him any ill-natured pranks, soon learned to respect the vigour of his resentment.

Fangast, on the contrary, ever showed himself vain, proud, and domineering; there was a good deal of the bully, too, in his disposition, with that kind of courage that characterises the bully.

Drupe was ready to believe that he had greatly improved since he had arrived at man's estate; but still, though constantly meeting, both in the way of business and in the societies whereof they were members, they never became much more than mere acquaintances.

It was, therefore, with the very reverse of pleasurable feelings that Letitia's accepted lover saw his quondam schoolfellow becoming so intimate with Jacob Softly, and found him paying such marked attention to his daughter; and, as already said, he speedily became very uneasy.

"This," he told himself, "was the firstfruits of his delaying to put his relationship to Letitia on a proper footing. Had it been known that he was her accepted lover, Fangast would have been warned off."

Turning the matter over anxiously in his mind, the young man asked himself whether it would not be well to privately inform his suspected rival of his relationship to Letitia. But he saw at once that there were insuperable objections to such a course; for, in the first place, neither her uncle nor her father was a party to that relationship. Clearly, the only proper course for him to pursue was to put himself right with his uncle. But suppose he should, as there was reason to believe he would, refuse his consent to their engagement? What then? He would certainly be obliged either to undertake to renounce all claim upon the lady or to discontinue his visits to the house, neither of which positions could he regard as at all supportable.

In his dilemma, Pennyfold saw another way in which he might probably worst his enemy. He might warn Letitia against him, and perhaps, he thought, he ought to do so; for was he not known in Hydeborough as a rather graceless young man? But when it came to the point of action, Pennyfold's sense of honour revolted against the treachery. Whatever he did must be fair and above board.

CHAPTER IX.

TO-MORROW !

Summer was now past, and winter near at hand; the nightingale no longer sang in Hockley Wood, where it had so often charmed Pennyfold Drupe as he walked home of nights, and the swallows had gone away. The hedgerows were still bright with many a lowly gem, and the woods gay in their autumnal foliage; yet there was a seeming sadness in the air for that the fall of the leaf had begun, and the wind, striking against the parched leaves, produced a wailing sound—the dirge of the dying year.

Pennyfold, measuring his daily path, noted these changes from bright to sombre, and took pleasure in the moods they wrought in him. None who have not lived in the country, and taken delight in all the varied phases of its changing life, can conceive how finely attuned the senses may become to every sight and sound, and how each fresh aspect of the revolving year stirs the heart, like a symphony played by the hand of the Master in His own great temple. And it is a hard, coarse nature, indeed, that cannot be soothed and comforted by these harmonies, and elevated too, and refined, if it will but heed them.

Pennyfold Drupe felt all this as he had never done before; he felt that his contact with nature in her beauty and peace this fair afternoon—for it was an afternoon when he left business earlier than usual

—had effected something in him that was wanted, had raised him somewhat out of the slough into which he had of late been sinking.

The young chemist had for some time been out of harmony with himself; he had been falling into an abject, cowardly mood, as though to love had been too much for him. Had his love been too much for him? he asked himself. Had its effects, so far, been to destroy peace and self-command, not to increase them? He had certainly for weeks past not been like himself. He had taken fewer botanising excursions, he had neglected his garden, and the chemical researches he had been pursuing in the hope of effecting a combination that would bring him both fame and fortune were intermitted.

“Surely,” he mused, as he thought of these things, “surely if love cannot raise and strengthen one it were better to discard it. Must the love of so noble a creature as his Letty debase him in his own esteem, and make him grovel and fear, and be less than a man? Heaven forbid! A great love should act greatly.”

With these and similar thoughts passing through his mind. Pennyfold reached Hawthornden just as the last rays of the sun were lighting up the churchyard elms and the weather-vane on the old tower with a rosy flush, and transforming the end of their cottage, up which a Virginia creeper had clambered even to the very chimney stack, into the resemblance of a cascade of rubies. He stood at the gate lost in admiration, until recalled to himself by a tap on the window. It was his mother, who, expecting him early, had his tea steaming ready for him, well knowing what the walk from town did for his healthy appetite, and, mother-like, ever fearful lest half-an-hour’s fast should leave unheard-of deleterious effects upon his constitution.

“I am admiring the effects of the sunset upon the elms and upon our creeper,” he said.

“I should have thought you would have been too hungry for that,” replied Mrs. Drupe, who had come to the door.

“I am never too hungry to stand and gape at a bit of beautiful colour,” replied the young man, “or, at least, not often,” he added, wishing to be quite accurate.

“But that won’t feed you, my boy; and your tea is waiting.”

“I don’t know, mother,” returned Pennyfold; “the walk from town this afternoon has, I think, fed me a great deal; any way, I feel both stronger and better for it.”

After finishing his evening meal, the young man announced to his mother his intention of going to pay his Uncle Softly a visit. Mrs. Drupe wondered why he had dressed himself so carefully for the occasion, but said nothing.

As he strode along beneath the bright stars, the thought occurred to him (not for the first time)—

“I have not told mother yet of my love for Letty, and of her love for me; but if my suit prospers to-night with uncle, I will tell her in the morning. I wonder what she will think of it! It will make

her happy, I know ; that is, if uncle favours my wish. If he does not—well, there will be no need to make her share my unhappiness.”

But he could not think of failure in his present mood, and so arrived at Cuckoo Hill confident of the success that was about to crown his wishes now that he had cast away his unworthy fears. His confidence in this instance, however, was destined to disappointment : he found that his uncle had retired, indisposed.

“Father has grieved him again,” was Letitia’s rueful answer to the query in his look.

“What has he been up to now?” asked Pennyfold.

“It is too absurd,” the young lady replied, smiling in spite of her vexation. “I think he will end by driving uncle crazy—poor uncle, who is so sensitive!”

“But what has he done?”

“Look at that and you will see” (producing a long yellow theatre bill). “Did you ever know anything so absurd?”

“I don’t see anything at all yet,” returned Pennyfold, “except that they are going to play *She Stoops to Conquer* at the Theatre Royal.”

“Can’t you see who’s going to play Tony Lumpkin?” cried Letitia.

Pennyfold read : “‘Tony Lumpkin—Jacob Softly, the brother of his Worship the Mayor of Hydeborough.’ What—? Ah! ah!”

“I don’t think it is such a very laughing matter,” said Letitia, pouting, then smiling, and finally stamping her little foot, and exclaiming, while the tears filled her eyes : “I wish that man had turned out to be anybody else’s father but mine. There!”

“It might have been just as well,” returned Pennyfold, thinking of the vexations Jacob had been the means of bringing upon him.

“Well, I never!” exclaimed the young lady, wiping her eyes. “I don’t think there was any need to consult you in the matter.”

“I beg your pardon, Letty! The words escaped me more through seeing your distress than anything else.”

“I’m sure you need not ask my pardon, Pennyfold; you were quite right; it is only I who don’t exactly know what I would be at. But to think of his going and hiring himself to play at the theatre, and of all characters that stupid, detestable Tony Lumpkin! I should not have minded so much if it had been Othello, or Orlando, or the Prince of Tyre, or something heroic; but Tony Lumpkin, that it is the ambition of every grammar-school boy to play! I never knew anything so ridiculous in the whole course of my life—did you?”

“Never!” said Pennyfold.

“And then to think of their going and sticking one of their wretched, dirty yellow bills on the tree at the top of the hill, just, of all places, where uncle was most likely to see it as he came home! And there is no colour he detests so much as yellow.”

Pennyfold agreed that it was very lamentable.

"He confesses he had it put there on purpose," Letitia explained ruefully, "thinking uncle would be pleased to see that he was determined not to be idle. That's what he said : as if it was not worse than idle to be a mere Tony Lumpkin ! and to think that he should be my father !"

"You might do worse than have a Tony Lumpkin for your father, miss," said the subject of the foregoing dialogue, strutting into the room ; and why William should take offence at my impersonating that character, and go to bed in a pet, I can't comprehend ; but my brother never did appreciate art."

"Your art seems to consist in making uncle miserable," returned Letitia ; it is perfectly heartless of you !"

"He is so very easily made miserable. Why can't he be jolly and free, and indifferent, like me ?"

"Because," replied Letitia—

But what that "because" was never transpired ; for at this juncture Mr. Gander and Maria were announced, and the topic of conversation was changed. It returned into the same channel a few minutes later, however, on John Henry's congratulating the actor on his approaching appearance on the local stage.

"I love the theatre," said the young man, "although I've very seldom been inside one, and I suppose never will be again, Maria not approving it."

"No, I should think not," returned Maria. "If I saw you going in at the door with 'Pit' written over it, I should think you were going into the 'bottomless pit' !"

"My dear Miss Goosey," said Jacob, throwing himself into an attitude, "the theatre is the sign and measure of a nation's civilization. Where you have got no stage you have got no manners."

"And they are very ill manners where the stage is from all I hear," returned Maria.

"Where you have not the play the people are dull ; mirth is an antidote to care ; laugh well and you will be well," recited Jacob, as though out of a book.

"I don't object to a harmless laugh," said Maria ; "our minister says it is better than medicine, and cheaper too ; but for a good laugh give me the Punch-and-Judy show — and you can see that without going into any pit."

Jacob's face brightened up on hearing this speech. "You must see my Punch-and-Judy," he cried.

"Have you a Punch-and-Judy show ?" exclaimed Maria.

"What is that ?" demanded Letitia, who had retired with Pennyfold to the embrasure of a window, there to observe the moon, or something of the kind.

Jacob, finding he had been indiscreet, gave Maria and John Henry a sign to be mum, but it was too late ; Letitia took him by the button of his coat, and catechised him so closely that he was obliged to confess that he had purchased a Punch-and-Judy show.

"It was a great bargain," he said ; "five pounds had bought the lot,

including Toby, the cleverest little thing in the dog line you ever saw, and the big drum. He would be able to reimburse himself the amount of the outlay in a fortnight ; Grigs, the man he had bought the show of, had said so."

"You don't mean to say you intend to go round with it?" exclaimed Letitia, in dismay.

"Why not?" asked Jacob. "What else should I buy it for?"

"The man will drive poor uncle mad!" cried Letitia. "To think of going about with a Punch-and-Judy show! It is positively worse than Tony Lumpkin! You must just go and sell it again at once, or give it away, or burn it, or get rid of it in some way; for if uncle sees you with it, it will be his death."

"Who is going to let him see me with it?" returned Jacob, doggedly. "We are going to keep to the villages with it. They are too confoundedly mean in this chapel-ridden place to let poor strolling people make an honest living. There are so many local shows—church shows, chapel shows, teetotal shows—that they are envious of the little a poor outsider may pick up, and drive him away from the place as a vagabond. I hear that they brought the fattest woman in the world here a year ago come Martinmas, and business was so bad that the poor creature went away as thin as a goat—starved. I say live and let live!"

"But," said Maria, "if folks did not want to see the fat lady, it was not their fault surely."

"They should have wanted to see her," returned Jacob; "it is not to their credit not to want to see the wonders of nature when they are brought to their doors."

"Well, you can't reproach me," put in John Henry; "I went to see her, and rare and fat she was. She would make twenty-four of you, Maria."

"No comparisons, if you please, Mr. Gander," replied that lady.

Letitia took her father on one side, and had a long expostulation with him, the result of which appeared to be satisfactory, as she presently rejoined the others with her face wearing its usual expression of pleasure and content, while Jacob's expressed satisfaction in every feature.

The fates were not propitious to Pennyfold. Several days passed without an opportunity occurring for him to have his long-desired chat with the Mayor. But finally, one Friday evening, he succeeded, as he thought, in bringing the subject on the tapis. There was a meeting at the Town Hall of the Help-your-Neighbour Society, over which the Mayor was to preside. Pennyfold attended the meeting, and before his uncle went on the platform he took the opportunity to tell him he had something to communicate to him. Might he walk home with him after the meeting?

The Mayor said he should be pleased to have his company home.

During the meeting, Pennyfold thought he looked very worn and tired, and half repented that he had decided to trouble him with his affairs when he had so many other matters to think about—the

annual municipal election fever having just begun, which was always a weariness to Mr. Softly.

When the meeting was over, Pennyfold joined his uncle as he was leaving the hall. He seemed to have forgotten all about their previous conversation, and indeed seemed quite oblivious of the companion by his side. They walked together in silence as far as Meadow Road, a thoroughfare at right angles to Cuckoo Hill, and its continuation townwards, Eastgate, at the point where the one begins and the other ends.

The young man's nearest way home was to go down Meadow Road to Watergate, and so by the town bridge and the high road—it being too wet a night to take the field path; so at the corner he bade his uncle “good-night,” saying that he wanted to speak to him about Letitia and himself, but it would do another time when he was less tired and preoccupied.

“O yes,” replied the Mayor, “I remember you mentioned it some days ago; to-morrow, to-morrow! Good-night, sir. By the way (handing something to him), these are yours.”

It was a pair of spectacles in a leathern case.

“They are not mine,” said Pennyfold; “are they not yours?”

“No; I left mine at home. Good-night!”

Pennyfold turned round after walking a few steps, and watched the old gentleman until out of sight.

“Poor uncle!” he said to himself. “I never knew him so absent before; they are his spectacles. I doubt these vexations about Jacob are doing him no good. I wish I had seen him right home.”

Little he thought how many a pang it would have spared him had he taken those few extra steps. But the regret soon passed from his mind, as he went bounding on his way, repeating to himself the words—“To-morrow! to-morrow!”

(To be continued.)

Facts and Gossip.

MR. JAMES CANTLIE, F.R.C.S., recently delivered an address at the Parkes Museum of Hygiene, on “Degeneration Amongst Londoners.” The lecturer defined London, hygienically considered, to be a region where there was no ozone, as a place where, either from the want of light or ozone, sun-burning was unknown, and as a place where beneficial exercise—that is, exercise in the fresh air—was impossible. A Londoner was one whose father and mother were born, brought up, and lived in the area he had defined, and who, himself or herself, was brought up and lived in London, and whose only notion of a relaxation was a run to the country or the seaside on a Bank Holiday. It was well-nigh impossible to find a third, and absolutely impossible to find a fourth, generation of pure Londoners; the progeny ceased, partly from moral, and partly from physical decline and inability of continuance. The pure Londoner

of the third generation which he had been able, after much search and inquiry, to get hold of was a picture of physical decline, involving shortness of stature, narrow chest, deformity of jaws, miserable appearance (squint prevailing), scrofulous diseases, and small head. Pure Londoners were seldom to be found in workhouses because they died young, and from the fact of their being young. They were able to "light porter," sell papers, and by some shiftless means earn a livelihood. Entering at length into the effect of too little exercise—beneficial exercise—upon children, youths, adults, families, nations, and races, the lecturer foretold evil to the townsfolk of to-day if means were not taken to provide means of exercise in the fresh air.

ACCORDING to Dr. Hyades, who has lately returned from Tierra del Fuego, whither he was despatched on a mission by the French Government, the Fuegians are the lowest human beings in the scale of existence. Their language contains no word for any number above 3; they are unable to distinguish one colour from another; they have no religion and no funeral rites; and they possess neither chiefs nor slaves. Their only weapons are bone-pointed spears; and as they grow neither fruits nor vegetables, and their country is naturally barren, they are obliged to live entirely on animal food. Even these savages possess, however, some social virtues. They are not cannibals; they ill-treat neither their women nor their old people; and they are monogamous. Wife-beating may, after all, therefore, be a symptom of advanced civilization.

Answers to Correspondents.

[Persons sending photographs for remarks on their character under this heading must observe the following conditions:—Each photograph must be accompanied by a stamped and directed envelope, for the return of the photographs; the photograph, or photographs (for, where possible, two should be sent, one giving a front, the other a side view), must be good and recent; and, lastly, each application must be accompanied by a remittance (in stamps) of 3s. 6d., for six months' subscription to the MAGAZINE.—ED. P. M.]

H. M. (Windhill).—Your organization favours an active life; are in your element when you have something to do physically as well as mentally; you should not confine yourself to the desk. You have a predominance of the reasoning intellect; are good at planning; would do in a wholesale business. You can manage a business where you are responsible. You have strength of mind and will, and can regulate your conduct. You have not a heavy base to the brain, hence should not go to extremes, nor take upon yourself severe labours. You are not characterized for selfishness, nor for having a greedy, grasping mind. If you are not a business man you should qualify yourself for some profession like that of a teacher, writer, editor, or engage in some public official position. Cultivate Language. You have powers to design and get up new forms of things, and might succeed in architecture; but business first, managing and superintending second.

J. S. (Gloucester).—You are characterized for ardour, earnestness, intensity, and excitability; are constitutionally strong in your will, and have more than average physical strength, if you will keep within bounds. Are remarkable for your powers of observation, your practical talent, your ability to take the advantage of circumstances, your desire to travel, your intuitions of mind, and quickness to take a hint. You have great self-possession in times of great danger, but little things put you about rather too much. You are organized for a position that requires a prompt, wide-awake intellect, where you have had previous experience; also for a position of command, where you can take responsibilities. Guard against too much excitability, and against too great tenacity of will; encourage restraint and prudence in action. You would make a good explorer and miner.

J. L. (South Kensington).—You possess more than ordinary executive power; are in your element when you are full of business. You cannot take life quietly. If your energies are properly directed you will make a very efficient woman, being able to do two days' work in one. If your disposition becomes soured, and you were ill at ease with your surroundings, you could make others very uncomfortable. It is quite important that you regulate your feelings, and properly direct your energies. You are also quite emotional, enthusiastic, and easily carried away with the excitement of the occasion. You are reformatory in your views, not particularly reverential; but more conscientious than spiritual. You would make a good nurse; would do to be connected with the army, where it wanted someone to run a little risk to save life and to act the part of a nurse. You have extra abilities to cut out, fit, and make, to draw as an artist, and to construct. Are remarkably ambitious, and are quite desirous of doing something worthy of a name and position in society. Your character is somewhat similar to Miss Hosmer's, the artist.

H. F. (Cheshire).—You have a great thirst for information, and a kind of intellectual curiosity that is not satisfied with anything short of positive knowledge. Your remarks are distinct and definite, and you are ably qualified to criticise and notice all kinds of discrepancies and inconsistencies. Be careful and not get into the habit of finding too much fault. You have a favourable moral brain: are respectful, sentimental, spiritual, hopeful, and quite conscientious. You are also frank and candid in speech, decidedly domestic, affectionate, and devoted as a lover. You are liable to overrate your friends. You prefer to be settled in a home of your own, and to call your friends around you, and to enjoy their society, or else to be out, engaged in labours of love where you can be benefiting society.

A. & B.—The organization of the young man indicates that he is well disposed, and of a kind disposition, yet very tenacious of his own way. He is not particularly gifted or high-toned in quality of organization; is of the plebeian type; he will improve much as he

grows older, but is rather odd and awkward, and cannot deliver himself with ease. He needs a wife of a finer grain and type, a higher order of the nervous temperament, and one who can make a good appearance in society.—The young lady is organized to be a lady; is in her element in society; has a very distinct individuality of her own. She is rather too high in the crown of the head. She cannot forget herself; is rather too mindful how she appears and how she is treated; she cannot accommodate herself to a common ordinary sphere of life. She should marry a man of wealth and position if possible. She appears to be remarkably sensitive and very conscientious. She is generally happy, and has an amiable disposition. She has scholastic abilities, and might succeed as a writer, and in music.

C. B. B.—This likeness indicates general tenderness of mind, and comparative delicacy of constitution. He may be generally healthy, and enjoy himself, but he could not be toughened into a good soldier; he is not adapted to hard work and exposure. Should seek employment of an artistic or scientific nature, or devote himself to trading and business. He has good scholastic abilities, rather strong imagination, a great love for beauty and perfection. He is quite nice and particular about everything, and has an aversion to doing dirty work. The tone of his mind is comparatively elevated and refined, and he is given to the sentimental, and has strong faith in spirit-life. Will be greatly tempted to preach and teach, and has favourable qualities for a speaker.

W. F. (Cheshire).—You have gifts worthy of cultivation. You are able to rise so as to be superior in your position. With proper discipline and education, you could take a public position and sustain yourself. You may not excel as a speaker, but you have good powers to think, plan, reason, block out work, superintend and oversee. If you do not study for a profession, you had better manage, if possible, to become a manager. If you devote yourself to a profession requiring you to talk, you will be more remarkable for thoughts than language to express them; will be quite ingenious in argument; will show considerable taste, imagination, and love for oratory. You will manifest a warm, ardent, genial, and domestic disposition. Have more than average ambition to excel; and possess a high tone of mind which comes from a large development of the moral feelings. If you are true to your nature, and do your best, you can exert more influence in the sphere in which you move than nine young men out of ten. Your constitution is one that will not allow you to trifle with yourself. You have no extra vital stock or lung power, and although you may be healthy, yet there is danger of your running the race of life too quick if you allow your ambition and aspirations to be your guide.

A. J. C. (Exeter).—You have an aspiring turn of mind; are awake to what is going on around; are ardent and earnest in your nature; are not satisfied with ordinary progress. You would travel by an

express train if possible, and do everything else on the same general plan. Your perceptive powers are all good, which makes you quite wide-awake to what is taking place, and gives you a thirst for positive knowledge. Your general memory of what you see and experience or do, is good ; and you possess an intuitive intellect, are quick to discern truth and character. You will take great delight in the study of science, mental and physical ; will find the study of physiology and phrenology to be exceedingly interesting. You are rather too confiding ; liable to trust human nature too much, and would be more successful if you were more cautious, guarded, and restrained. You will gradually drift into public life, either to teach, preach, or be a public lecturer or entertainer, and you can settle down to business, but you will not have much aptitude that way. You had better study, and qualify yourself for one of the three professions, either a doctor, lawyer, or preacher ; the older you grow the more you will incline to the latter.

J. P. (Exeter).—You have a thirst for positive knowledge ; are a student of nature ; are continually gathering facts ; are fond of flowers, of scenery, and of botany. You have capacities in book-keeping, figures, and mathematics ; are naturally methodical in everything you do. Are fond of science, more especially natural history and mental philosophy. With some you are free and easy in conversation where the spirit moves, but are somewhat given to reverie and absent-mindedness. You have a high degree of industry and executive power to accomplish what you desire to do. You have none too much prudence in prosecuting your desires, for you do not know where to stop until your work is done. If you have any one fault greater than another, it is that you take too much on yourself, and promise too easily, and spend the energy to-day that you will need to-morrow. You have a domestic mind ; could make a loving mother and a devoted friend, only it would be very difficult for you to find that friend. Are rather remarkable for your powers of intuition. You delight to read character, to study human nature, and to look forward into the future. You make nice distinctions ; have an intuitive perception of truth, and your first impressions are your best. You have gifts for a teacher, a musician, a writer, and an artist.

M. S. (West Bromwich).—You come from a very remarkable family, having some strong points of character. If you had been a man, you would have made your mark in the world in some public capacity. As a woman you have more ability than the majority of women, and could succeed in a man's business where he would fail. You come from a long-lived ancestry, possessing very remarkable gifts. You are exceedingly tenacious, firm, and persevering ; are remarkably conscientious and rigid in your ideas of justice. You possess the elements of kindness, and would do for a head nurse in a hospital. You have a very high sense of character, are anxious to excel, and do something worthy of being put on your tombstone. You are noted among your friends for your judgment, your general

intelligence, your power to understand ; for your methodical mode of doing things, your mirthful disposition, your general industry and economy. You are ingenious—could build a house or make a machine. To you the great mass of mankind act very foolishly, and if you had an army, as Gideon did, you would sort them out and take the 300 rather than the 3,000.

TEL (Aberdare).—You should be characterized for strong imagination ; are full of schemes and plans ; are anxious to do something extraordinary ; are ingenious in contriving and devising ; will find it difficult to settle in any one calling, for you want to do too many things. Your internal nature would prompt you to be a speaker, for you would delight to be before an audience creating a sensation. You are a great lover of beauty and all kinds of perfection in art, oratory, and nature. You are very systematic, particular, and precise in your mental operations ; are quite executive, forcible, and subject to high states of excitement. You are witty, fond of fun, and may succeed in entertaining others in company. You have talents for a mimic and imitator ; could succeed as an artist if you would apply yourself and be satisfied with what you did. You want to do everything on a large scale, but you must settle down to some one thing—as an artist, public speaker, or a business man—and stick to it, so as to accomplish something definite in life.

P. P. (Northampton) is very ardent, earnest, restless, uneasy, ambitious, and anxious to do for herself, and to secure a position in society. She would prefer not to marry until she could bring as much character into the family as her husband, for she would not want to take an inferior position. She is not so much of a lover as she is a friend, and values intellectual and moral people most. She is given to study and reflection, has many ideas of her own ; she is ill at ease in a quiet life ; is very ambitious to excel in something. If possible, she should devote herself to scholastic pursuits, teaching, and writing, but has a variety of gifts, one of which is art, another is book-keeping and financiering, and the study of the exact sciences. Would be a very correct musician, with ordinary practice ; but she never will be satisfied with herself, because her standard is so high that she cannot reach it ; and if she approached it, her standard would become still higher, so that the climax would be still difficult to attain.

J. P.—Can't tell. He is surely a very close, self-contained, and undemonstrative man. With reference to your questions about Colonel Ingersol, we are not personally acquainted with that gentleman, nor have we any information respecting his habits. His organization indicates that he would be likely to be a good liver, but that does not necessarily imply vice. The Editor of the MAGAZINE is a practical phrenologist, but he is also a literary man and journalist, in which capacities his time is chiefly occupied. As to your questions about John Stuart Mill, we regard him as one of the greatest minds of the century.

THE Phrenological Magazine.

APRIL, 1885.

JOHN MACKAY.

THE likeness of Mr. Mackay indicates a highly organized body, as betokened by the face and neck. He is capable of more than ordinary physical enjoyment; possessing an unusual degree of force, executive power, capacity to go through with severe trials. He can harbour the strongest kind of feelings of like and dislike;



in every aspect there is the indication of force and stoutness of feeling. He must have found it difficult, especially in boyhood, if not in manhood, to regulate his impulses. He has a heavy base to the brain, which gives him energy, reso-

lution, and desire to overcome obstacles. He is most decidedly a man of the world. He possibly may be religious, and pay some attention to that subject, still the head is not high enough to indicate any special religious feeling or moral tone of mind.

His intellectual faculties appear to be well rounded out, giving him correct judgment of things, capacity to acquire knowledge, to take the advantage of circumstances, to arrange and systematize his ideas, and to do things according to rule.

He has great versatility of talent; is fond of music and art; and can turn off business with dispatch. He is seldom at a loss for means to accomplish his ends. He could have excelled, with suitable training, in art, music and oratory. He has the temperament that appreciates applause and popularity. He has the ambition that makes him anxious to become distinguished in some way. He is fond of fun and sport; has gracefulness of manner. He is youthful in disposition, and desirous of pleasing others, and is generally plausible and bland. There is a powerful mixture of force, mirth, energy, and genius. He would have excelled in tragedy if he had become an actor. In money matters he would keep his money stirring; would be liable to speculate; to run risks, and fall back on his energy for success. He is hopeful and enterprising, none too cautious and restrained. He could not well adapt himself to the ordinary walks of life, or be contented with ordinary duties and labours, but would want a four-horse team, a very fast engine, and convey news by lightning. The summing up of his character is energy, enterprise, and versatility of talent. L. N. F.

John Mackay is one of the richest men in the world, and he began among the poorest. He is known as the Bonanza King. The following, cut from an American paper, will give some idea of the position and influence he wields.

"Well, that beats the 'Arabian Nights' all hollow," exclaimed a gentleman in the Russell House one day, as he threw aside his newspaper. "But I don't believe Mackay has struck pay dirt this time.

"Doesn't it seem funny that a man who, twenty years ago, was shovelling ore for four dollars a day and glad to get work of any kind, should now loom up as the prospective father-in-law of a real live prince? Funny! Why, that's no name for it; it's simply amazing. But I don't believe the deal will pay as big profits as squeezing the holders of Sierra Nevada stock by the mild application of a fifty-cent assessment on every share.

"However, Mackay is generally pretty level-headed, and with 100,000,000 dollars in gold cash to back him, and his daughter a

princess, I wouldn't wonder if he showed the Johnny Crapeaus in Paris how we used to make things hum in California and Nevada."

"Are you personally acquainted with Mr. Mackay and his family?" asked the reporter.

"Acquainted with them? I rather think I am, young man. I used to cabin with Mackay over in Sierra County, and lots of times we went without our breakfasts because the cupboard was empty and we hadn't the dust to replenish it. Those were glorious days, though, and when one of us was lucky enough to find a pocket which panned out rich, the whole town was soon made aware of it, and we made the place howl as long as it lasted. Everybody couldn't get rich, though, and some of the boys, Mackay and myself included, went to work for a company, but we couldn't stand it long. Shovelling gravel in a sluice about three or four feet above the top of your head ain't very much like play, even if the wages are good. We didn't mind it a bit when we were prospecting for ourselves, but it was mighty tough to do it for anybody else. I struck out for White Pine and Pioche, and Mackay made a break for Virginia City, and there's where he struck his gait, although first along he didn't seem to know how to make money.

"He took his time about it, and when he got a chance he made it tell. The first big money he made gambling in stocks—and that's how he made his millions—amounting to about 20,000 dollars. And where do you think he put it? He bought a draft for the whole business, and sent it to his poor old mother in Ireland. That showed what the man was made of. Most of us forget the old folks at home when we get a dollar or so ahead, but Mackay didn't. He sent the money, and started over again. Everything he touched seemed turned into gold. If he bought a hundred shares in a wildcat claim, the stock began to boom, and he always sold out just before the price went down. After a while he made enough to buy a controlling interest in one of the mines, I think it was the Gould & Curry, and then he began to boss the market. If he wanted stocks to go up, they went up like a kite, and when he said drop, they went tumbling like a pile of bricks. The two Jims—Flood and Fair—as well as O'Brien were in with him in all the speculations, but they couldn't have made half what they are worth if Mackay had been out of the firm. Flood lived in 'Frisco and Mackay, Fair, and O'Brien lived in Virginia City. O'Brien didn't amount to much, because he always told all he knew, and more too. If the Bonanza firm intended to make the stocks go up or down, O'Brien knew nothing about it. He made money, no matter how the market went, and that was all he wanted. There was only one man on the coast that Mackay was afraid of, and that was Ralston, of the California Bank. Ralston was even smarter than Mackay, but he hadn't the money to carry out his schemes, and had to knock under. That was the time Mackay broke the California Bank, which was the slickest piece of work I ever heard of.

"In those days there wasn't any paper money on the coast, and if

a man wanted to go down to 'Frisco from Virginia or Carson, and had any great amount of money, it was mighty heavy and inconvenient to pack around. For the convenience of the people the California Bank issued gold certificates, which were the same as the gold notes now in use, except that no bank except the California was obliged to redeem them.

"Mackay secretly bought up all the certificates he could without exciting suspicion, and at last got about 1,000,000 dollars' worth. He put them in a grip, and walked into the bank in Virginia City, and demanded coin for them. They couldn't pay them all, and had to put up the shutters. The very moment the bank was busted he opened his Nevada Bank, which to-day is as good as any in the world. Ralston, the cashier of the California Bank, committed suicide by drowning as soon as he heard the news.

"You would be surprised to see how common and slouchy Mackay looks when he is in Virginia. I have worked for him, and know him as well as I know my brother. I have often seen him on the street with one trouser leg inside his boot, the other outside. He always wore a gray slouch hat and dark coat, and when he drove out in state a white horse hitched to a buckboard was good enough for him. The horse could be bought anywhere for 75 dollars, and the buckboard was dear at any price. When his family were in Paris—and they were there nearly all the time—Mackay kept house in the Curry office on D street, in Virginia, his ostler acting as chambermaid, valet, and man of all work. Here he was at home to anybody who cared to call on him, and visitors were invariably treated to cigars. But such cigars! One whiff would be all that a fellow could stand. They were the very worst in the market, but Mackay didn't know it. He paid a good price for them, and supposed they were the best, but not being a judge of the weed, he always got left on a bargain of this kind.

"I guess he has had all of the Pacific slope he wants. The mines on the Coomstock are too deep and too hot to be profitable, and Virginia City has seen its best days. Only a few mines are being worked, and they are not taking out enough ore to pay expenses. When they get hard up, they levy an assessment, and that keeps them running for a little while.

"This prince business is all good enough on the other side of the water, but plain John Mackay, even if he has shoals of cash, has no use for princes in his family, and I'll bet his rough manner will shock the nerves of his highness on more than one occasion."

COURAGE is a wonderful agent in throwing off disease. A walk of five miles will cure many an occupant of the lounge. Will-power will surpass pill-power in nine cases out of ten, if not in every one. To hold a bottle of smelling-salts in the hand on account of a headache may be just the thing at times, but to fling a pound of fruit-cake out into the alley, and then walk a furlong as a reward for not eating the compound, is nearly always a much better thing.

PHRENOLOGY AND ITS CRITICS.

BY J. L. CAPEN, M.D.

ERRORS come and go, but truth is abiding. It may be obscured for a time, or rejected, but when lost to sight it is no less secure than the seed that is buried in the soil.

It is more than half a century since the doctrines of phrenology were published, and although they attracted general attention, and became extensively endorsed by scientific men, it has now become customary with authors and lecturers to disavow belief in them. Doubtless this is considered by many *prima facie* evidence that they have been found erroneous. And yet there are thousands in Europe and America who have carefully examined them for themselves, and have undoubting confidence in their truth and importance. This apparent discrepancy can be reconciled by a consideration of a few simple but important facts related to the subject itself in part, and in part to the condition of society and the present stage of civilization.

The object of Dr. Gall in the promulgation of his discoveries was purely scientific. He aimed to establish the two facts, that the brain is the organ of the mind, and that the several mental faculties are sustained by different portions of the brain. His object has been fully accomplished. Physiologists have no longer any doubt on either of those two points, and they constitute the scientific basis of phrenology. There are, indeed, those who go further, and say: "The brain is not, strictly speaking, the organ of the mind, for this statement would imply that the mind exists as a force, independently of the brain; but the mind is produced by the brain substance; and intellectual force—if we may term the intellect a force—can be produced only by the transmutation of a certain quantity of matter."* Dr. Gall discouraged the attempt to develop a system of practical phrenology, not thinking it within the capacity of men in general to so understand the human constitution as to be able to come to correct conclusions from the phrenological premises. The present position of phrenology shows that if he was not altogether correct, he had at least reasonable grounds for his opinion.

It is to Dr. J. G. Spurzheim that we owe the first attempt at a system of practical phrenology. He endeavoured to complete the indications of character by adding to the system

* "Human Physiology," by Austin Flint, Jun., p. 695.

of craniognomy a consideration of the temperaments and their influence upon the activity and direction of the mind. Having greater faith in the teachability of the popular mind than Dr. Gall, he laboured hopefully and earnestly, and with such success as to educate a large number of able witnesses to the truth of phrenology—pupils so well instructed that, go where they would among men, they would find fresh confirmation of the science, and only disgust or pity for those who seek to make a reputation for scientific acumen by turning it into ridicule.

Practical phrenology is not a positive or pure science, and will not be criticised nor commended as such by any man of clear conceptions, and here is *one* of the follies of the critics. They treat it as though it were subject to the same laws of evidence as physiology, whereas it should rather be compared to the practice of medicine, which is, equally with phrenology, based upon science, without being itself an exact science. Phrenology and physiology of the brain are to each other as two wheels of a machine that gear into each other, each one is completely distinct, and yet intimately related to the other.

The labours and discoveries of Doctors Gall and Spurzheim gave an impetus to the study of the physiology of the brain, so great that it may well be said that physiology of the brain originated with them; and the dispute with them on the fibrous structure of the brain demonstrates the ignorance that existed at that time.

Physiology of the brain progresses very slowly; so slowly, indeed, that as yet no one mental faculty has been definitely located, nor does it yet appear by what means other than that of the phrenologists, the higher faculties can be located. The nearest approximation that has yet been made is that of the organ of Language, and its supposed position has been changed from the under surface of the brain to the lateral portion. When the physiologists shall have completed their task, they will have demonstrated the function of every convolution of the brain, whether situated at the base, at the lateral and upper surface, or in the fissures; but should that grand result ever be reached, they will not, even then, be able to define the powers of the mind, nor the proclivities of the character in the living subject—almost the only work of any practical utility; and it is doubtful whether they will have contributed much to the advantage of phrenology. The phrenologist knows that one man with a moderate-sized brain may do more and better thinking than another man with a very large brain of inferior quality; and he has a system by

which he determines, with a degree of accuracy that is reliable, what is the quality, activity, and variety of the brain's actions; but the physiologist cannot form any opinion on the living subject. He must see the brain itself, observe the complications of the convolutions, and the depth of the sulci; he must analyze the composition, and find how much there is of water, of fat, of fibrin, and of phosphates. Nor will all this decide what the man has been, unless he should know what amount of the brain was appropriated to sensation, motion, and to the connections of the sympathetic nervous system.

The phrenological evidence is not *demonstrative* like that of physiology; it is *cumulative*, and requires the repetition of examinations under a great variety of circumstances. The phrenologist makes his discoveries as the hunter finds the wild honey—the flight of one bee having been observed, and its direction noted, the line of the flight of the second must be traced to the intersection. To illustrate in practice: a man is found with a head high in the front, nearly under the central part of the coronal suture, and with plenty of brain at the base—he is energetically helpful and benevolent; another with the same fulness in front, and a thin head, who cannot endure the sight of suffering, and who, instead of relieving it, runs away. Many other very significant combinations are sought to confirm the function of what is called the organ of Benevolence, such as its combination with ambition, with hopefulness, with great cautiousness, &c., and in all this the question of the location of the organ upon any convolution of the brain, whether on the surface or in the median fissure, is not involved, for that is a question of physiology, not of phrenology. With the phrenologist, it is simply a question of the form of the head as produced by the brain, and in harmony with character.

The work of locating the so-called “organs” having been completed, a *foundation* has been laid for a system of phrenology, although its structure is not complete until the influence of the constitution has been carefully considered. A variety of character may be found with a similar form of head, and under the same educational influences, when there is a difference in the quality of the brain, and the temperament, for these latter conditions will affect the activity of the mind, and thereby the degree of intellectual and moral elevation. There are many criminals who are so, largely because of a poor quality of organization. The animal propensities are stimulated by physical conditions and by necessity; and in coarse organizations they have a considerable degree of activity—a degree sufficient to satisfy the demands

of the mind for action ; hence follows a period of indolence which, by a man of fine organization, would be improved by study and thought. The animal propensities require little or no education to excite them to action, while it is quite different with the intellectual and moral faculties. A high degree of education and training are necessary to the formation of a positive moral character. It often requires much discrimination and a careful balancing of many questions to decide what is true, just, and good ; and it is impossible for a dull mind to solve all moral problems correctly while the appetites and the selfish desires have all the while an intensity of action sufficient to insure a decision in their direction.

There are always two factors in character, viz., organization and education—the latter term including all external conditions that influence the organization. This is so important a truth that when overlooked no dependence can be placed upon any phrenological deductions from the organization, or upon any calculation of the influence of education. Every one will admit this in theory, but in practice it is very commonly overlooked, and the attention directed to one factor only : one class of persons assuming that a man is just what his environments have made him, and another class that hereditary influences are accountable for everything. Were there but slight differences in the organization to be found, this fact would constitute a serious if not an insuperable difficulty in the study of phrenology ; but such is not the case. Heads may be found differing so greatly in form that the natural proclivities of character appear in spite of educational influences, and the learner should take his first lessons from such strongly-marked cases.

These causes have their influence in creating doubt in some minds, but they are not adequate to account for the opposition and apparent contempt with which many persons have treated phrenology. An additional reason of great importance may be found in the state of society, and in the degree of civilization which has been reached. If we suppose the law of force to be that of the first state of society, and that of moral merit that of the highest, we shall find ourselves in a transition state between the two. Men seek for special privileges through some means not founded upon merit. Whatever will lift a man above his fellows is energetically struggled for and tenaciously held, whether it be aristocratic birth and title, political preferment, wealth or conventional honours. This is not the age for universal impartiality of judgment, and hence the greater the light that phrenology can shed upon the rank of man in Nature's classification of

nobility, the greater will be the dislike that many persons will experience for its teachings. Who would expect the man who has been elevated by the advantages of wealth or social influences, or by a combination of strategy, energy, and ambition, to welcome a searching investigation of his natural abilities, his leading motives, and his reliability?

Among the men of learning there is a full proportion of Nature's nobility, and it is of peculiar interest that the finest minds among them have either accepted phrenology, or have criticised it with so much frankness and intelligence as to be its promoters, and in being the friends of truth they have been the friends of phrenology.

Finally, the status of a practical profession depends upon the character and abilities of its practitioners, and until phrenology shall be recognised by public institutions of learning, the demand for instruction in it will be largely supplied by self-constituted professors, many of whom will be incompetent, and will degrade the cause they profess to teach. This class of pseudo phrenologists are a counterpart to its enemies—the critics—and furnish them with just the evidence against it which they need, by their blunders and inaccuracies in the delineation of character.

The study of phrenology is not the simple affair that many persons seem to suppose. It is not to be mastered in a few weeks or a few years. It is true, however, that a general knowledge of its propositions, and an acquaintance with its more prominent details may be quickly learned, and this little will be of great interest to persons of a thoughtful mind; but the proverb, "Half of the truth is a whole lie," is emphatically applicable to whatever relates to the study of human character. That phrenology is always a study, that there is further progress to be made, that every man is in a measure unique, and that the ultimate truth is only approximated, never attained—is, to the lover of the study of human nature, an attraction, not a discouragement. Experience must teach the application of the principles; the judgment must be trained to the discrimination of the shades in the temperament, the quality and activity of the brain, and the power to combine all the conditions which enter into the formation of character must be cultivated by long exercise until it is almost unconsciously performed. When this degree of skill has been attained, there will be a charm to this study that can be found in no other. Men will appear in sharply-defined characters, acting out their natures, or struggling with more or less success to overcome moral deformities; while the ease with which a plausible knave deceives his superiors

will often excite his astonishment, although he be fully aware of his own liability to mistake in his opinions of that class of persons whose selfish and moral natures are so nicely balanced that their conduct will be determined by education and surrounding influences which are beyond the reach of his calculations.

Philadelphia, Feb. 1885.

THE CONTENTS OF CHILDREN'S MINDS.

SOME light may be thrown on the question which is being discussed with so much warmth in the press, as to the value of the methods employed in the recent inquiry into the existence of over-pressure in elementary schools, by a study of some interesting inquiries made into the contents of the minds of children of the same class in Germany and America. The object of the inquiries was to ascertain the nature of the material, in its rough state, on which schoolmasters in elementary schools in towns like Berlin and Boston had to work before the Government inspector appeared on the scene. The inquiries were instituted by the Pedagogical Society of Berlin, and by Mr. Stanley Hall, of Boston, and although the tests employed were of a very simple kind, they were found to be of very difficult application, as neither the society nor Mr. Hall were willing to accept the results of a mere show of hands in answer to questions as satisfactory. The chief problem to be solved was, "What may city children be assumed to know and have seen by their teachers when they enter school?" In the case of Berlin the results were far from being satisfactory, and out of about 2,000 returns sent in only about half of them gave trustworthy results. With the experience of the German society before him, Mr. Stanley Hall undertook an examination of a similar kind in the elementary schools of Boston, and framing a new set of questions more in accordance with the surroundings of American children, he employed four of the best trained and experienced kindergarten teachers to carry out the examinations by questioning three children at a time. On account of the strictness of the conditions, Mr. Hall was only able to accept the records of about two hundred examinations, and these he has tabulated according to the percentage of ignorance of the whole number of children, and also comparatively as to that of boys, girls, Irish children, American children, and children under training in the kindergarten. The results

as shown by these tables will, we think, be a great surprise to most people, and we regret that we can only give a few examples, choosing those which show the amount of ignorance on subjects which should be best known to children, and not those which show the highest percentage of ignorance. The ages of the children ranged from four to eight years, and they were chiefly of Irish and American parentage, a small number being German. The returns were carefully tabulated to determine the influence of age "which seemed surprisingly unpronounced, indicating a slight value of age *per se* as an index of ripeness for school." Of familiar living objects, 65.5 per cent. of the children had never seen an ant, 62 per cent. a snail, and 20.5 per cent. a butterfly. Of trees, vegetables, and flowers, 83 per cent. did not know the maple tree, 63 per cent. had never planted a seed, 61 per cent. had not seen potatoes grow, 55.5 had never gathered buttercups, and 54 per cent. had not seen roses growing. Of the parts of their own bodies 90.5 per cent. did not know where their ribs were, and 21.5 per cent. did not know their right hand from their left; 75.5 per cent. did not know the seasons of the year, and 65 per cent. had never seen a rainbow. With regard to home surroundings, 93.4 per cent. did not know that leather things came from animals, 89 per cent. did not know what flour was made of, 88 per cent. were unable to knit, 64.5 per cent. had never bathed, 36 per cent. had never saved cents at home, and 35.5 per cent. had never been in the country. With respect to the sexes, boys appear to be more intelligent than girls on all subjects except the parts of the body. The American children were more intelligent than the Irish, and, as might be expected from the nature of the questions, those trained in the kindergarden were far ahead of both. Although the tables did not show it, Mr. Hall asserts that country-bred children rank higher than city children in all the subjects of examination, and in many items very much higher.

Besides the tabular results Mr. Hall gives examples of many curious answers which were elicited during the examinations, and which show the ease with which a child's imagination is led astray, often by the mere jingle of rhyme, alliteration, and cadence of words and sentences. Thus, butterflies make butter or eat it, grasshoppers give grass, bees give beads and beans, all honey is from the honeysuckles, kittens grow on the pussy-willow, and even poplin dresses are made of poplar-trees. When a cow lows it blows its own horn; at night the sun goes or rolls or flies, is blown or walks, or God pulls it up higher out of sight. He takes it into heaven, and

perhaps puts it to bed, and even takes off its clothes and puts them on in the morning. The moon comes around when it is a bright night and people want to walk, or forget to light some lamps. Thunder is God groaning, or kicking, or turning a big handle, or grinding snow, walking loud, breaking something, throwing logs, having coals run in, pounding about with a big hammer, hitting the clouds, clouds bumping or clapping together or bursting—are samples of a number of curious answers which show that inquiring into the contents of children's minds must be an exceedingly entertaining, if not a very profitable occupation. It would seem that the idea of Paradise is not the same with children as with their parents in America. Everything that is good and imperfectly known to children is located in the country, and when good children die they do not go to Paradise but to the country—"even here from Boston," adds Mr. Hall. The lessons for parents, schoolmasters, and examiners which are to be learned from these interesting inquiries are, according to Mr. Hall, that the knowledge which an average child of the labouring classes in towns possesses at the outset of school life "is next to nothing of pedagogic value," and the best preparation parents can give their children for good school training is to make them acquainted with natural objects, especially with the sights and sounds of the country, and talk about them; and to send them to good healthy kindergartens. The table showing the percentage of ignorance indicates the order in which education should be effected; the conditions which immediately surround a child are most easily learned, and those which are more remote with greater difficulty, hence the advantage of objects and the difficulty and dangers of books and word-cram. School inspectors and psychologists may also learn from Mr. Hall's experiment how much tact and ingenuity is required to arrive at the contents of children's minds, and how careful they should be of accepting the results of questioning large bodies of them. The astounding ignorance displayed by the poor children of Berlin and Boston, and which no doubt is equalled, if not surpassed, by the same class in our own country, is but the reflex of the ignorance of their parents and the population among whom they are bred, and any cry like that of over-pressure which is likely to interfere with the slight efforts being made to remove it, should be well weighed and accepted only on the clearest scientific proof—a kind of proof which is not attainable from the data we now possess.

EMANCIPATION FROM NERVES.

IT was not Socrates who said "perfect happiness is impossible because man has nerves;" but the remark might have been made with entire truth by the great discoverer of hemlock as an antidote for a scolding wife. For it is to the nerves chiefly that mankind, and especially womankind, owes the major portion of its sufferings. The amount of misery occasioned by mere nervousness, so-called, is very great; and when we add these to the special pangs for which separate and individual branches of the nervous system are directly responsible, the sum total becomes simply incalculable. If it were not for his meddlesome nerves man could bump his head or pinch his fingers, or even have his corns trodden on without any serious annoyance. Fire and frost would lose all their terrors; and the fiend, Neuralgia, would return howling to his den, if he has one, and be known no more among the children of men.

The medical profession has long recognised this tyranny of the nervous system. It could hardly help doing so, since it is one of the chief sources of the medical man's income. But with a self-sacrificing spirit, rarely found in any profession, the doctors have studiously sought to relieve mankind from the tyranny. Their noble efforts have not been wholly unavailing. They succeeded, long since, in removing specially troublesome nerves, like those which preside over the mysteries of toothache and the messengers employed in directing neuralgic operations. But an advance which has recently been made in the same direction is so marked, not only in its immediate effects but its glorious possibility, as to cast all previous efforts into the shade.

In the current number of the *Medical News* it is related that Dr. Edward T. Reichert has been experimenting recently in the laboratory of Professor Schiff at Geneva upon the reunion of divided nerves. His object, in the plain untechnical language of the *News*, "was to determine whether fibres of nerves of entirely different origin and function, though still motor or sensory, would unite, and should regeneration occur, to ascertain whether a motor nerve was capable of conveying impulses peculiar to another sensory nerve. To this end, the vagus and hypoglossal nerves were selected as being of distinct origin and function and as affording the best facilities for observation. Five dogs were prepared by Professor Schiff by cutting the hypoglossal on one side close to its exit from the cranium, and the vagus at the thyroid

gland. The peripheral end of the hypoglossal was sutured to the central end of the vagus by a silk thread through the neurilemma."

"The result," we quote from the remarkably clear statement of the *News*, "proved that the motor fibres of the vagus in the five dogs operated upon, united to similar fibres of the hypoglossal, and that the hypoglossal fibres conveyed impulses which were peculiar to the vagus apparatus. They showed, moreover, that in at least one dog, irritation of the sensory fibres in the hypoglossal trunk gave rise to impulses which were conveyed by the sensory fibres of the vagus to the vagus centres, and produced effects like those produced by excitation of the vagus trunk, thus proving in both instances that a motor or sensory nerve can convey impulses peculiar to another motor or sensory nerve of entirely different origin and function."

It will readily be seen from this luminous exposition, what an important step has been taken toward the full emancipation of man from the dominion of his nerves. Not daring to eliminate the nerves wholly, the doctors have discovered the next best thing, how to make them behave themselves. It is perfectly plain, that if a hypoglossal nerve, starting out on what we may call a hypoglossal mission, can be made to take a vagus course and produce a vagus instead of a hypoglossal sensation, similar changes can be made in the expeditions of other nerves. A sensation, for instance, starts from the brain or from a nerve centre, with a full determination to apprise the individual that his tooth aches. But the nerve road having been judiciously cut and reunited in an improved fashion the sensation ends in a harmless injunction to sneeze.

Like all great inventions it is very simple when you once "get the hang" of it. Like most great inventions, also, there will undoubtedly be mistakes at first in operating it. In detaching the nerves that carry painful sensations and tying them to others whose purposes are peaceful the severed portions of the latter must, of course, be taken care of. Without great care this process may result in serious confusion, if not in grave unpleasantness. While it would be cause for rejoicing if a nerve, bent on producing a twinge of the gout, could be balked of its purpose and compelled to content itself with a mere wink or nod, it would be a serious matter if the nerve, whose ordinary vocation it is to attend to harmless winking and nodding, should find itself compelled by its new associations to go into the pain-producing business. Yet it is inevitable that such results should follow

from an imperfect comprehension of the new method. Perhaps it is just as well. Otherwise the doctors who are entitled to so much credit in the premises might find their services dispensed with altogether too speedily.

The grandest promise of the new discovery lies in its application to the reformation of criminals. The prison surgeon of the future called to examine the convict just sentenced will ascertain what his crime is and the nerve course followed by his sensations in carrying out his purpose. Then by a judicious use of the scalpel and proper subsequent treatment he will shunt the murderous or burglarious sensation in such a direction that it will eventuate in an irresistible impulse to work. The reformation thus effected will be radical and complete, and it will only be necessary to prevent by stringent enactment any readjustment of the convict's nerves to the criminal basis by irresponsible outside practitioners.

COOKING—A FINE ART.

Do our girls understand how it is we live on the food we eat? This is the way: Food, inasmuch as it can be burnt, is a source of power. In burning it gives forth heat, and heat is power. If we so pleased, we might burn in a furnace the things which we eat as food, and with them drive a locomotive or work a mill, or convert them into gunpowder, and with them fire cannon or blast rocks. Instead we burn them in our own bodies, and use their power in ourselves.

Food passing into the alimentary canal is there digested; the nourishing material is with very little change dissolved out from the unnutritious refuse; it passes into and becomes part and parcel of the blood. The blood, driven by the unresting stroke of the heart's pump, courses through the whole body, and in the narrow capillaries bathes even the smallest bits of almost every part. Kept continually rich in combustible material by frequent supplies of food, the blood as well at every round sucks up the oxygen from the air of the lungs; and thus arterial blood is ever carrying to all parts of the body, and muscle, brain, bone, nerve, skin, and gland, stuff to burn, and oxygen to burn it with.

Everywhere oxidation is going on, everywhere change is going on. Little by little, bit by bit, every part of the body, here quickly, there slowly, is continually being made anew by the blood; made anew according to its own nature. Though it is the same blood that is rushing through all the

capillaries it makes different things in different parts. In the muscle it makes muscle; in the nerve, nerve; in the bone, bone; in the glands, juice. Though it is the same blood it gives different qualities to different parts. Out of it one gland makes saliva, another gastric juice; out of it the bone gets strength, the brain power to feel, the muscle power to contract. When the biceps muscle contracts, and raises the arm, it does work. The power to do that work, the muscle gets from the blood, and the blood from the food. All the work then of which we are capable comes from our food, from the oxidation of our food. And this we learn from the physiology of food.

Now let us apply it by examining for a few minutes the interests of our kitchens, or the anatomy of our food. We see from the above the importance of having on our tables bone, muscle, and nerve-forming foods, and these in proportion as we individually need them. What these various kinds are we should advise all mothers to inquire into. In a few of the American Cookery Schools it is thought that the dishes generally prepared are too rich and dainty to take the place of the plain old-fashioned dishes which are more healthful and simple; but if so, the former pander to the tastes and prejudices of the pupil, or else there is an incorrect idea regarding the preparation of food. In regard to the English Schools of Cookery, they are, we thoroughly believe, constituted on a practical basis, and are prepared to teach the elementary principles of the culinary art, and to give instruction in the simplest and least expensive way, as well as in the elaborate and costly modes of preparing food. The idea that every mother should teach her own daughters how to cook is a capital one on the face of it, but alas, unfortunately, the idea is practically a most unsatisfactory one, and barren of results. In many cases the mothers themselves neglected the necessary knowledge before they were married, and have since become so busied with other cares, that they left everything in the hands of the cook; and thus they are as incapable of teaching their daughters household arts as they are of teaching them music, physiology, hygiene, and various other things that are intimately connected with their every-day life.

To meet the requirements of the age, as ample provision should be made in our educational system for giving instruction in cookery as in any other branch of learning. This duty should not be left to mothers alone, or to schools organized by private enterprise. It should be a public matter, of which the country should take cognizance.

Then, again, it is said that if our foremothers were careful and conscientious cooks, why cannot the rising generations be? But many will say that sentimental dissertations on the superior quality of the plain and healthful dishes of our grandmothers are absurd when we know that many of the materials are much cleaner, purer, and better than in days gone by. Any intelligent woman of to-day should feel mortified to acknowledge she is no better cook or house-keeper than her grandmother was with all the enlightenment of the times. In fact, the cookery of the past is not the cookery demanded by or adapted to the wants of the masses to-day. We need to see improvements in the arts of preparing food as well as improvement in the other arts and industries. By improvement we mean food adapted to our changed style of living.

One writer says, "Were a superintendent of public schools to recommend text-books in chemistry, geography, or grammar, from the discarded rubbish of fifty years ago, he would be considered by every educated person unfit for his position, and if I," she continues, "should attempt to teach pupils in domestic economy to make bread, roast meats, and prepare food generally, according to old-fashioned formulas, and to conduct a household as it was conducted in the days gone by, the people of to-day would be justified in asking me, with one voice, to vacate my chair in their school of domestic economy and step down and out of their agricultural college."

As our tastes differ in one thing, as generation succeeds generation, so they do in another to correspond. A greater variety of food material is continually coming into our markets, making it necessary to bestow fresh thought and care on new preparations and combinations. If this instruction cannot be obtained by young girls in their homes, then by all means let them gain the needful scientific knowledge in one of the first-class cookery schools that are scattered throughout the country, which information will save them from a smattering knowledge of the art of cooking, so often thought to be sufficient.

J.

THE TRAINING OF CHILDREN.

THE following remarks on the training of children is from an old London Magazine of 1781. The theme is as fresh and interesting to-day as it was a hundred years ago; hence there is no need to apologize for reprinting "old thoughts," in which so much good sense is displayed:—

“Did not daily experience convince us to the contrary, one would hardly think it possible that there could be such a thing as a cruel parent ; and yet I am satisfied in my opinion, that parents in general are oftener guilty of folly than cruelty. Whatever may be the disposition of a man to severity, yet the fond endearments, wheedlings, and caresses of his children, whom he considers as part of himself, will ever prevent him from acting the part of a tyrant, unless he has a soul callous to all feeling and deaf to all the calls of humanity. I believe it will be found upon inquiry that one-half of the errors which children commit, and our daughters in particular, owe their existence to the folly and ambition of their parents, who, under the ambitious idea that their children should dress as well as their neighbour’s, feather them up in all the empty parade of fashion, and thereby sow in their little hearts those seeds of pride which spring up all the rest of their lives, and effectually check all the beneficent shoots of reason. To know how properly to deny or comply with the requests of a child seems to be one of the nicest and most essential points of a parent ; to deny it what is necessary and suitable to its own constitution and circumstances is cruel and unjust ; while to grant more, is madness and folly. But here will arise the question, who is to be the judge of what is necessary, the parent or the child ? I fear the child too often determines that point, and the parent gives it up, when he should invariably support and maintain his own opinion. When once, through our weakness and affection for our children, we thus suffer them to triumph over us, we then take a lasting farewell of all order and subordination, and we must not complain should they then oppose us in every step we take, despite our authority, look upon us with indifference and contempt, and at last accuse us of being silly dotards, and the authors of their ruin. I am aware that this kind of doctrine will draw a frown on many a pretty face, but as I write not to flatter the folly of any one, nor to insult the empire of beauty, I shall address a few words to the little female panting hearts. Remember, my little ones, that there is nothing truly valuable in this life but virtue, and that the parade and glare of dress is more its enemy than its friend. Though modesty peculiar and graceful to your sex will not permit you to own, yet certainly true it is that your fondness for dress owes its origin to the wish of procuring yourselves rich and opulent husbands. Your gaudy dress may, indeed, entrap the fool or the coxcomb ; but what girl of sense would wish to make a husband of either ? The sensible man will not be directed in the choice

of a wife by her lawns, her silks, or her satins, but by the internal perfections of her mind. He will consider how far she is capable of giving up the gaieties and pleasures of life to the painful task of managing her family. He will consider that as she will partake with him of all his pleasures and comforts, so she must be of a mind that will soothe him amidst the cares, troubles, and disappointments of this life, and think no home like her own, nor no man like her husband. Happy must be such a union, equally miserable the reverse. My little daughters of Eve, however morose or antiquated you may consider these reflections at present, be assured the day will come when you will sensibly feel the truth of them, when you will with a sigh acknowledge how true was that long since told by 'A Tender Parent.'"

THE HYDEBOROUGH MYSTERY.

A TALE OF A GREAT CRIME.

BY CAVE NORTH.

CHAPTER X.

THE MYSTERY.

How often when we are intent upon the cards, counting our trumps, gloating maybe over the impending discomfiture of our partners, an unexpected little ace turns up, and we find ourselves nowhere. So in the game of life—for some will still consider it a game, wherein smartness wins, too,—how often does it happen that everything looks fair and promising—a good hand, a run of luck, and a fortunate finish in sight—when suddenly Providence strikes in a hand, and plays the game against you. Something of the kind now happened, and Pennyfold Drupe's hopeful plans collapsed like a house of cards, and there resulted a coil which it took many a long day to make straight.

The morning after the meeting of the "Help-your-Neighbour Society," Pennyfold rose in high spirits, and was presently on his way to town; following the high-road instead of the Scaleby fields because it was still wet and dirty under-foot. As he walked along, he thought of his uncle's "To-morrow," and the thought was an inspiration.

At the bridge he found a number of people standing about in groups, and talking earnestly. "What was the matter?" he queried of one group. They looked at him inquiringly: "Had he not heard the news? Not heard that the Mayor had been missing since last night, and was supposed to have been drowned?"

"The Mayor drowned! My uncle missing!" exclaimed the young man in blank amazement. "That cannot be! Why, I left him last night not three minutes from his own door!"

"That may be, Mr. Drupe," said one of the crowd, the landlord of the inn hard by, who knew Pennyfold; "all the same he has been lost since last night, and this morning his hat and coat were found below there on the tow-path."

He further learned that the police had been dragging the river for his body, but so far without success. In consequence of the flood caused by the recent rains, it was surmised that it might have been carried a long way down.

The young man was horrified, and hastened to Acacia Villa as quickly as he could. There, naturally enough, he found everybody in a state of consternation. Poor Mrs. Softly was quite prostrate; she could neither do anything nor say anything to the purpose, so much was she overcome by the loss of her companion of nearly thirty years. She sat in her chair in her room—their room—wringing her hands, and sighing and moaning. It was pitiful to see the poor woman's grief. Letitia had been up with her all night (indeed, no one in the house had been to bed), and her eyes were red and swollen with weeping.

Pennyfold gathered from his cousin and the other members of the household that the Mayor had last been seen by a policeman a few minutes after ten o'clock at the foot of Cuckoo Hill; and when Mrs. Softly heard him say he had walked with his uncle as far as the corner of Meadow Road, she cried petulantly—

"Oh, Pennyfold, why did you not come with him the few steps farther? It would hardly have taken you five minutes."

The young man shook his head sadly, and said he would that he had.

"If you had, he would still be by my side," continued the bereaved woman. "Now he has been done away with, and I shall see him no more. Oh, my William! my William!"

The poor woman did not think to spare anyone in her grief. She asked Pennyfold a hundred questions, as to how her husband looked, what he said, etc., on their last memorable journey together, and appeared to intimate, by voice and manner, that she considered he ought to be able to account for his absence. But Pennyfold was so bewildered by the suddenness of the misfortune, and by his aunt's grief and unreasonable demands, that he gave a very imperfect account of what took place, and could not recall some of the most important particulars.

The theory most generally accepted by the public and the police up to the present time was one of suicide, although it was difficult to square it with all the facts. In order to get to where his hat and coat were found, Mr. Softly must have gone along the Meadow Road a distance of a few hundred yards to the point where it bends sharply to the west in the direction of River Street, and then either followed the road till he came to the latter street, or entered the foot-path that branches off at the elbow of the road, and leads down to the river. It was surmised (always regarding of course the theory of suicide) that he must have taken the foot-path, which at that time of

the night would be very lonely ; whereas in the lower part of the Meadow Road, which is built up, or in River Street, he could hardly have gone any distance without being seen and recognised.

On any other theory than that of a deliberate intention to commit suicide, no conceivable motive for going in that direction could be discovered. He had told his wife that he could be home by ten or a little later, and he was a man of the utmost precision and punctuality in regard to his habits, so that if there had been anything likely to call him away, he would have been sure to say so. Besides, he had complained of being tired and having a headache when he went out. Mrs. Softly, indeed, had desired him to stay at home, but he did not like to disappoint the "Help-your-Neighbour" Society, and moreover he thought the walk would do him good.

At the point where the hat and coat were found there is a descent from River Street to the tow-path, used chiefly for the watering of cattle, and only protected from the road by a low post and chain fence. It was easy, therefore, for any one going towards the bridge on a dark or foggy night to walk straight into the river. Indeed, it is said that a former mayor had done this, but was fortunately pulled out by a man who witnessed the mishap from the bridge, and who, common report further averred, was rewarded for the act with a sixpence.

The finding of the hat and coat where they were, however, precluded the possibility of supposing that Mr. Softly had fallen into the river by any such mischance as the latter ; besides, the night, although very wet, had not been specially dark. Nor did it look, in the circumstances, as though there had been foul play, else why should the articles in question have been left on the tow-path ? The whole thing was a mystery, and whatever way you looked at it you could find no solution to it.

When eleven o'clock arrived without her husband making his appearance, Mrs. Softly had become somewhat anxious, and sent Thomas, the footman, to see if he could learn ought of him. Thomas presently returned, saying that the "Help-your-Neighbour" meeting had dispersed over an hour ago, and that he could hear nothing of Mr. Softly. The wife now became alarmed, and sent to two or three neighbours to inquire if he had perhaps dropped in for a chat ; but in vain : no one had seen him.

Meanwhile, Jacob and Fangast, who had accidentally met half-an-hour previously at the "George," sauntered up to the gate of Acacia Villa, where they found a policeman, the butler, and one or two other servants in anxious colloquy. Both of them immediately engaged in the search, Jacob protesting loudly that nothing could have happened to his brother—no one would harm so good a man ; but if they had, they might calculate upon having to settle with him, Jacob, etc.

Jacob and Fangast made diligent search and inquiry in every direction, subsequently calling in the assistance of Mr. Farrel and his myrmidons, with the result, as we already know, of finding the

articles of attire by the river-side as described, but of discovering no further trace of the missing chief magistrate of Hydeborough.

CHAPTER XI.

GANDER'S ADVICE.

Day after day passed by, and week followed week, and still no news was forthcoming of the lost Mr. Softly. For a week or two the strange disappearance was "the latest mystery." Every newspaper contained its paragraph about it, and many were the solutions hazarded of the mysterious affair. But though these solutions satisfied more or less their authors, they brought no satisfaction, no comfort, to the family or friends of the missing gentleman. Poor Mrs. Softly never recovered from the blow, but sank and sank until she was but the shadow of her former blithe and brisk little self. Letitia did all that daughter could do to soothe and comfort her; telling her the dear husband and uncle was not dead, and would assuredly turn up again; but in vain, the poor woman only shaking her head in reply, and saying she would never see "her William" again.

Nor was it an idle word that Letitia uttered when she said she believed her uncle was alive; she did honestly believe so, though she had no theory like the clever newspaper people. She simply had faith that he would one day re-appear, and then all would be made plain, and no dishonour would attach to him.

The young lady was obliged to hear theories discussed which accounted for her uncle's disappearance by some act of dishonour on his part. These she rejected with warm indignation. Her father annoyed her beyond measure by not only listening to and repeating, but by inventing, too, such disgraceful solutions. In reply to her indignant remonstrances, the unconscionable Jacob would say: "If one theory would not account for his brother's disappearance they must find others; and if a creditable one would not fit the case they must discover a discreditable one that would." And it must be admitted that it would have made little difference to Jacob which had proved true. He had educated himself beyond any such trifling moral prejudices.

Still—be it said to his credit—the younger brother took a great deal of trouble in trying to find some trace of the elder; and, though he was ready to accept almost any theory, discreditable or not, that would account for his brother's disappearance, yet, like his daughter, he professed resolutely to disbelieve in his death. "He did not believe he had been murdered; he did not believe he had committed suicide, or that he had fallen into the river. He may have gone off for a score of reasons, or he may have been carried off for as many more, but—"

"You old vagabond, I believe you know something about him!" Fangast would say, as they sat over their grog together, and the mystery was discussed between them.

And truth to say, although it is hardly likely the young auctioneer believed what he jokingly affirmed, there were not a few who privily hinted dark suspicions of vagrant Jacob.

During these weeks of trouble and anxiety, Fangast was much at Acacia Villa. Jacob did nothing without his advice, and hardly went anywhere without being attended by his faithful Jerome. He made himself useful in a thousand different ways, and became so necessary to the bewildered family that his counsel was sought in regard to almost every question that arose. His position was so peculiar that Mr. Beckles, the family solicitor, could not quite understand it, and resented what he considered his intrusion into the family affairs; but even tetchy Mr. Beckles's hostility was soon disarmed by the young gentleman's constant courtesy, good temper, and agreeable manners.

During these days, Pennyfold Drupe had much to disturb him. He saw Letitia perhaps more than ever, but seldom alone. Her aunt required her attention so constantly that she could never quit her side for long at a time, and when chance permitted them a few minutes' converse, it was almost always in the presence of others. It seemed as though Jacob and Fangast had made up their minds never to let the two be together. One thing was certain, the former took no trouble to disguise the fact that he cared very little for the young chemist, and that he encouraged the auctioneer as the suitor of his daughter in every possible way.

John Henry Gander was Pennyfold's only confidant in these trying times. That ingenuous youth gave him all the comfort he could, which, in the circumstances, was not much. At one time he would suggest that Drupe should "punch" his rival's head—a piece of advice that Pennyfold refrained from following, because he could not exactly see how it would advance his cause, to say nothing of the risk his own head might run of being "punched" too; and when two heads are punched instead of one, there is not that satisfaction that is desirable in such cases. At another time, Drupe was to tell Mr. Fangast that he was not wanted at Acacia Villa, or he was to prevail on Letitia to commit that breach of good manners; or some other advice was tendered equally appropriate to the occasion. When Gander's prolific brain enabled him to hit upon no specific form of advice, he would endeavour to comfort his friend by the ancient trick of pouring injurious epithets upon the hated rival. He would call him "goggles" (in reference to his glasses); "Cheap-Jack," or "Going—gone" (in allusion to his calling); "lantern-jaws," "spouter," etc.

Gander had no love to spend on Fangast, for he, too, had been a school-fellow of the auctioneer, and had in his time got far more cuffs than smiles from him; and this, together with Jerome's airs of superiority, and perhaps his good luck, kept warm the grudge he still bore him. It was probably a mean little feeling that he nursed in his heart, but there it was, and whenever in his moments of devotion it chanced to confront him, he never thought it worth while to pluck it out.

One day, John Henry came in hot haste to Scaleby to acquaint Pennyfold with a new idea that had occurred to him. He had walked very fast from Hydeborough, and was almost out of breath when he met his friend in the little village street—as pretty a little street as could be easily found, with its fine old church, the “restored” porch of which was gradually being overgrown by a grateful mantle of ivy, and its quaint houses, small and great. When he had had time to recover his breath, he disclosed his idea. It was this: that Drupe should tell Letitia’s father of their love and ask his consent to their marriage.

“Then, you know,” he added, “if the old fellow makes any objection without giving a good reason, why then, you know, you can do without his consent; and run-away matches are often the happiest, you know,” he added, as though some additional inducement were needed.

“That’s just what I don’t know,” replied Pennyfold, with a smile.

“Neither do I, except from hearsay.”

“It is lucky for you, Gander, that you will never need to think of a run-away match.”

“I don’t know that,” replied John Henry, thoughtfully; “the course of love may run a little too smoothly.”

In which saying there was an enigma that Pennyfold did not at the time try to fathom.

Drupe was not a hot-headed youth, and therefore, though he rose to Gander’s counsel, like a dace at a tempting bait, he did not immediately snap at it, but like the cautious fish he eyed it from all sides. However, the result was that he decided to follow it. He arrived at this decision the night after Gander had come to Scaleby with his discovery, and he resolved to seek an interview with Jacob on the morrow. Not having seen Letitia in the meantime, he sat down and wrote a note to her, telling her of his intention, and asking for a few minutes’ talk with her in the morning as he came to town. Then he got Ben, Bridget’s deaf and dumb son, to deliver it along with a book he had promised to lend Miss Softly.

The morning was very fine after the recent rains; the sky was blue and cloudless, and although the last flowers of the year were lying dead on their stalks, and there was a fragrance of decaying leaves in the air, yet the atmosphere was so light and exhilarating that it was a pleasure to merely exist. On such a day one almost feels that nothing more is needed for happiness. Pennyfold swung along with a light and airy step; he had started betimes in order that he might not have to hurry, being of opinion that the feast of nature is one that should be taken with all leisureliness, like a banquet. On reaching the foot-bridge, the young man espied Letitia tripping towards him on the other side. It was the first time for weeks that his cousin had come to meet him on his way to town, and being so unexpected the pleasure of the *rencontre* was all the greater.

Pennyfold had been eager to discuss his decision with his lover;

but although they lingered a few minutes by the river-side, and then walked slowly towards Cuckoo Hill, they arrived nearly at the end of the field path before the happy youth had even thought of broaching the subject, there being so many other things for the time being more pressing that came to their lips. That was, after all, but a business detail, and since their meeting seemed to have lost much of its immediate importance. It was finally referred to, however.

When he had finished his explanation, Letitia asked him, with a delightful smile, why he was in such a hurry.

Pennyfold said he was not in a hurry, which was a bad answer—bad in substance and bad in form; for, in the first place, it was not true, and in the second, if true, he ought not to have confessed it.

“It is well you are not in a hurry, Pennyfold,” replied Letitia, “because there are two reasons why your plea must be deferred.”

“What are they?” asked Pennyfold, a little dismayed.

“The first is that it won’t do to bother aunt with our love affairs while she is still so ill, and it would certainly come to her ears, and trouble her much; and I am sure you would not wish that, would you? Therefore, at present we must leave things as they are. There is nothing else for it, is there?”

“But you have not told me your other reason yet,” said Pennyfold.

“Oh, that is because father has gone to London to see if he can find any trace of poor uncle; and we don’t know when he will be back.”

Pennyfold laughed, and when he told the young lady his reason for laughing, she laughed too.

“But, seriously,” said Letitia, as they tarried at the gate, “I would rather you did nothing in the matter while there is this uncertainty about uncle’s fate; I must have uncle’s consent to marry.”

As she said this her eyes filled with tears.

CHAPTER XII.

THE RODNEYS.

After many weeks of acute suffering, Mrs. Softly so far recovered as to be able to get about again, but it was as a mere shadow of her former self. The thought that “her William” might still be living—as her niece was constantly asseverating that he was—and want her, seemed alone to keep her alive. “If I knew that he was comfortably in his grave and at rest, I could die in peace,” she complained to Letitia, who was brought nearer to her aunt in these sorrowful days; “but I fear some worse evil has befallen him. Every night I dream of him, and always in some distressful state.”

As the weeks went by, and hope of the return or the discovery of her husband grew less and less, she became, outwardly at least, more reconciled to her loss; but all her elasticity and cheerfulness were gone.

Meanwhile, another cause of trouble arose. Jacob, who had at

first been kept somewhat in order by his brother's presence, and subsequently by the constant preoccupation by his strange disappearance, now threw off all restraint, and made the house that had formerly been so orderly and punctual the scene of continual disorders. He observed no hours, knew no moderation, and did in all things just as it seemed to him best, without the slightest regard to the habits or feelings of anybody else. He rarely rose before mid-day, because midnight and the small hours still found him drinking with his boon companions.

At first he was contented to meet them in the taverns he frequented; but before long this became irksome because of the necessity of turning out at a certain hour. Then Acacia Villa became the scene of nightly orgies, and the slumbers of its peaceful household were disturbed by the ribald songs and the drunken recitals of the stage-struck idiot and his fellows. The remonstrances of Mrs. Softly were in vain, and she was too weak to take any decisive action. Jacob, indeed, took advantage of her sad condition to turn the house into a Bedlam. She could, of course, have rid her house of him, but in order to avoid further scandal, and not to go counter to her lost husband's wish, which she held sacred, the poor lady shut her eyes to as much as she could, hoping that this might prove another passing freak.

To his daughter, Jacob was at times kind and indulgent, and then just as harsh and capricious. When she tried by persuasion to turn him from his self-indulgent ways, he would make all sorts of promises, but they were as easily broken as made. Strong indignation was not native to her disposition, and if she tried to assume it, she saw herself mocked and flouted. It was only a strong will that had any influence over her father, and there was no one in the house who could exercise such a will except Maria Goosey, who since Mr. Softly's disappearance, and Mrs. Softly's illness, had become an inmate of the house.

The person who had the greatest power over him was Jerome Fangast, and often Miss Softly found herself compelled to seek his assistance. The auctioneer, it should be said, was seldom present at Jacob's nocturnal orgies, but when he was he exercised a restraining influence over the more noisy spirits. The fact is, Jacob had fallen in with a boisterous, rowdy set of politicians, and for the time being it suited his humour to talk politics with them.

They had their rendezvous at the "Lord Rodney," where nightly the affairs of the State were discussed over endless potations of beer and of stronger and less wholesome liquors. The "Lord Rodney" politicians—or "The Rodneys," as they were less ceremoniously called—were a sort of perpetual committee, with power to add to or subtract from their number. They were self-elected, and were responsible to none but themselves. Alike competent were they to deal with home or foreign affairs; domestic legislation they may be said to have had at their fingers' ends; while as for foreign affairs, though not one in ten of them perhaps could tell you within a

thousand miles where any given country was, they would settle any question relating to any one of those countries in the tossing of a tankard.

But if there was one thing the "Rodneys" were stronger in than another, it was in matters municipal. Talk about questions of sanitation, of markets, lighting, paving, etc. ! here were the men who could settle you all such questions, and properly, too, while you were saying "Jack Robinson" ! Here were indeed Solons, here Lycurguses ! here were the heaven-born geniuses for whom the country generally—and Hydeborough in particular—was sighing, to save it from the bungling of the men who had no "call" for the work they had taken upon themselves to do !

How cynical the fate that had made them impotent—reduced them to the position of mere watch-dogs of the Commonwealth ! And yet how fortunate it was that they were there to watch over the well-being of the country ! What would become of the Throne and the Constitution, but for these, and similar, watchers on the tower—and in bar-parlours ? What, indeed !

Behold, Britons, the *coryphei* of your freedom, for has not every town and village, like Hydeborough, its free and independent patriots—its "Rodneys," in short ? Sometimes they call themselves by one name, sometimes by another ; but what signifies the name so long as they are watch-dogs in truth. Our "Rodneys" called themselves Constitutionalists, Conservatives, True Blues, or other equally well-sounding names ; but under any other name would they not have drunk as much, and talked the same amount of patriotism ?

First and foremost in the enumeration of the "Rodneys" must come Bob Toster, a painter he, and a broad-shouldered burly fellow, with a severe eye, and a fine shock head of hair. He was the summoning officer of the town, and had the calling together of all juries,—hence he had largess at his disposal, for seldom a week passed by without seeing three or four juries empanelled to adjudicate upon some case of sudden death ; and when twelve or thirteen men were needed for the purpose, Bob Toster had rarely to look further than the bar of the "Lord Rodney." In virtue of his public position, Bob was ringleader of the "Rodneys," and was invariably called upon to preside over their deliberations, except on special occasions.

Bob's right-hand man and chief supporter was Mr. Pipkin, the landlord of the "Lord Rodney," who, though he had been a root-and-branch Radical when he kept the tap known as the "Codgers' Rest," speedily became an ardent, not to say rabid, Constitutionalist, when he took possession of the "Lord Rodney."

Mr. Pipes, the plumber, was another prominent figure in this conclave. A large man, fat and red, with small bluish eyes, and a big voice. He was regarded as an uncommonly well-read man because he could pronounce rather glibly the name "Nigni Novgorod." It was an imposing thing to do, and Mr. Pipes seldom rose to his feet without finding occasion to refer to that well-known Russian town, where a relative of his had passed a year in some humble capacity.

Then there was Mr. Yardstick, the mercer, who with much to say had few words to say it in, and those so far down in his framework that he had to reverse the process adopted by the heron in the fable, having to pour in liquor to bring the said words within reach, and then the word that ever first came to hand was a "damn," or something like it.

Then there was Mr. Last; he was formerly Pipkin's best customer at the "Codgers' Rest," but speedily changed his political opinions and his place of resort when he found Pipkin's successor declined to give him the credit he had been used to. He was a ferrity-looking little man, very excitable, and extremely confidential with strangers, to whom, within fifteen minutes' of their first meeting, he would invariably communicate the fact that he once had "twenty-five pounds in the bank—twenty-five, sir!" adding that that was before marriage, since when "she has taken care of the money, and managed everything, shop and all, sir—a very clever woman!" These remarks he would follow up with the reservation: "Of course, though I let her manage the business, I manage her—manage her, sir, ah! ah!" But if the said manageress happened to put her head into the "Lord Rodney," and beckon her spouse, the little man jumped to obey her nod, like a well-trained dog.

Then there was Mr. Pippis, the draper, who was a Councillor, and hoped to be Mayor some day—a man who felt himself to be a great deal above the "Rodneys," but who visited their meetings occasionally, and patronised them generally, because he thought he could turn them to account; Mr. Globulus, the pawnbroker—rich, bumptious, and ignorant—who loved to hear himself talk, and once amused his townsfolk for a week by referring at a public meeting to the Suez Canal as the Sewage Canal, confounding that international water-way with one of those receivers of sewerage about which there was so much talk in the Town Council, of which he was member. Dr. Turret——. But why enumerate more? Do we not all know them in our several towns?

Among this set Jacob soon found himself a "first-ranker," as he himself put it. Any company was congenial to him in which he was followed, and the Rodneyites flattered him to the full of his bent. They were ever ready to listen to and applaud his recitals in proportion as he treated them, and he was never loth to empty his pockets for the pleasure of indulging his craze.

Bob Toster, however, saw something in him beyond a mere gull: he perceived a useful tool. Hitherto Jacob had been anything or nothing politically; under Toster's manipulation he speedily became a red-hot Tory, and talked as to the manner born about "stopping the flood-gates of democracy," "checking revolution," "upholding the Throne and Constitution," and all the rest of it. Bob now flattered him that he was taking his natural position—the side on which his ancestors had ever stood, and of which the Softly's of Turfshire were such an ornament.

Toster knew nothing about the Softly's of Turfshire any more

than Jacob did ; but he had heard the latter brag of the relationship, and it suited his purpose to represent them as staunch Conservatives. "It was all very well," said Bob, "for parvenus to be Liberals and Radicals, but if the old families, those who had good blood in their veins, did not stand by the Constitution, who would ? The country expected this of the wealth and talent of the land. The late Mayor, his worthy brother, had espoused the popular side, though he believed at heart Mr. and Mrs. Softly were Conservatives. It was for Jacob, to whom his brother's wealth would fall, to array himself on the right side—a side he was so well fitted to adorn by his many talents and his public spirit.

These and a thousand other flatteries were poured into Jacob's ear, until he was ready to believe anything, or attempt anything, at Toster's bidding. An idea had gradually been shaping itself in Bob Toster's mind, and he now decided to put it into execution. The senior member for the borough, an old and tried Liberal, was on his death-bed ; he might linger on for another month or two, as he had done for months past, but the end was certainly near, and might come at any moment. Within the last few days news had reached Bob from a private source that the senior member grew daily worse. Hence it was necessary to have a candidate ready to put forward in the Conservative interest at a moment's notice, and who, thought Toster, would do better than Jacob ?

Jacob Softly, argued the chief of the "Rodneys" would shortly inherit all, or the greater part, of his brother's wealth (such was the prevailing opinion, encouraged doubtless by Jacob's talk), although with the exception of some house property which his brother had, a little while ago, made over to him by a deed of gift, he inherited nothing until after Mrs. Softly's demise. And what was more, Jacob would spend it when he got a chance, which was the chief point with Bob Toster. In brief, Bob thought Softly was a good subject to bleed, and he proposed to bleed him accordingly.

The question of Jacob's candidacy for Hydeborough, was discussed nightly, both at the "Lord Rodney" and by the special committee appointed for the purpose, which met so frequently at Acacia Villa. The business of this committee was to persuade Jacob to consent. That worthy was by no means loth to accept the honour, but he shrank from the trouble it would put upon him. Moreover, he held off because it was so pleasant to his vanity to be so persistently courted and flattered. He was like the lady who enjoyed the wooing so much that she could not prevail upon herself to utter the fatal "Yes" that would bring it to an end.

But though Mr. Jacob Softly was indisposed to take upon himself any duties that would interfere with that life of ease and unrestrained indulgence which he foresaw would shortly be within his power, nevertheless he was not unwilling to make the opportunity that thus presented itself serve his vanity. He had thought the matter over in his own mind, and as he had already resolved to make Fangast his son-in-law, he now determined that, if possible, he should be member for Hydeborough too.

But though the auctioneer was nothing loth, and would willingly have been Conservative, or anything else for the honour of representing his native town in Parliament, yet he was not so easily gulled as Jacob. He knew that the Conservatives had not the shadow of a chance of returning their candidate, however good a one they might select ; but he believed the Radicals had such a chance.

The Liberal party in Hydeborough was split up into two sections. One section was composed of the old Whigs, and included some of the wealthiest and most respectable families of the borough. They had ruled the political roost for a long series of years, and wished to continue to do so. A few of the oldest men constituted a junta that decided all matters connected with the party, and though the electorate had broadened and deepened, they still shut themselves up in their exclusiveness, and wanted to dictate to all and sundry.

This the younger and more advanced Liberals would not submit to, and so, after all negotiations had failed, there came a split, and the more Radical spirits were determined to start an association of their own, and run a candidate devoted to their cause in opposition to Mr. Andrew Spratt, the candidate whom the Whigs had chosen.

Such was the state of affairs when Jacob put his proposition to Fangast. The former soon saw how hopeless a case would be that of his protégé as the Conservative candidate. "But I will tell you how the thing could be done," said Fangast, after a pause.

"How?" asked Jacob.

"You know I have spouted on the Radical platform, and I flatter myself that I have some influence with that lot. Well, this is my plan—"

It was in short this. He proposed that Jacob should allow himself to be put forward as the Conservative candidate, and that he should try to take some of the Whig votes from Spratt by raising the cry of the bulwarks of the old faith in danger—Spratt being credited with a strong inclination to free-thought. Then Fangast should get himself nominated as the Radical candidate, whose chances would be strengthened in proportion as Jacob succeeded in detaching votes from Spratt.

In short, this conspiracy, neither better nor worse than many another of its kind, was agreed on between the pair, and at the next meeting of the "Rodneys," Jacob gave his consent to become the Conservative candidate.

CHAPTER XIII.

PLOTTING MISCHIEF.

The carrying out of Jacob and Fangast's conspiracy required a deal of careful scheming, and the auctioneer had to employ all his wit to put it in train. When it got well whispered abroad that Jacob Softly was talked of as the probable Tory candidate, those who knew that worthy were at first incredulous, and then highly amused. Those, on the other hand, who had heard of but one Softly, and he

a William, immediately began to ask who this new light was, and when they learned, some of them were indignant, while others laughed.

Jerome Fangast, who was known to have been much in Jacob's company, was daily confronted with large interrogations in the shape of bewildered electors. Jerome desired nothing better than to have the forming of his friend and future father-in-law's public character. He therefore freely gave it out as his opinion that the Conservative party could not very well find a better man to put into the field than Jacob Softly. He was decidedly popular, although so new to the town; and he bore a name that was a household word in Hydeborough for uprightness and goodness.

"But how long will it remain so in his hands?" asked one elector. "By all accounts he is very different from his poor missing brother."

"The worst that can be said of him," replied Fangast, "is that he is a good companion and fond of his glass, both qualities that may go along with honesty and a good heart."

What Fangast said others repeated with interest, as it is the nature of men to do, until there was hardly any one in Hydeborough better talked of than Jacob, the vagrant. It was freely acknowledged that the Tory party might select a local man who might show a brighter record than Jacob; but they might still fail to do as well with him in regard to securing the seat. This was the point that Fangast in his quiet way, and Toster in his more public way, constantly insisted upon, and an aphorism of the former was so appropriate that every fifth man was giving it as a happy thought of his own, that "in such cases the unknown man is the best."

Besides talking quietly in his favour, Fangast also worked out Jacob's programme for him, telling him what to say on all occasions, and how to say it. He schooled him particularly on what he called the "religious blind!" Jacob was to be "staunch for the old faith." "Don't go into particulars," said Fangast; "stick to generals. You are safe there; everybody is safe there."

Jacob got his lesson off well; and in all companies he declaimed with well-feigned earnestness against Spratt's free-thought, atheism, latitudinarianism, etc., and it told well.

Meanwhile, Fangast was sedulously at work advancing matters in regard to his own candidature in the Radical interest. The Radicals of Hydeborough were many in regard to numbers, but few in regard to heads. Heretofore they had been like driven cattle, although not very dumb; they had been obedient to the mandate of the Whig junta, and from having hardly ever acted alone, they were now in the position that they hardly knew how to act alone. In a score of different places—for the most part bar-rooms—eager and often angry groups of men were asserting that they ought to band together and choose a candidate of their own; but they were at a loss how to set about banding. Fangast attended a number of these meetings, urged on them the necessity of organizing without delay, and wrought them up to white heat by showing them their wrongs. He

found a most useful lieutenant in the sub-editor of the Whig paper, the *Hydeborough Chronicle*. Job Caudwell had been known to him for some time, but he had not hitherto learned his abilities. Job professed to be of the politics of his paper, and he served his paper as devotedly as the stipend he received from it would allow him. "Beyond that," he would say, "no fellow could be expected to go."

One night after one of these heated but impotent public-house meetings, Fangast and Caudwell fell into conversation over some whisky toddy which the auctioneer had ordered. Fangast complained that while the Radicals would talk, and get hot, and shout, they could not be got to organize.

"Because they are children, and want to be taken in hand paternally," said Job.

"But how are you to do it?" asked Fangast. "You propose, they accept, but further they do not go. I have been trying for a fortnight to get them to hold one big meeting instead of all these divided hole-and-corner meetings, but it is of no use."

"I can manage that for you, if that is all," said Caudwell, with a smile.

"How will you do it?"

"By putting a paragraph in the *Chronicle*."

"But the *Chronicle* is Whig!"

"You will see. When and where shall the meeting be? In the Market-place on Monday—shall it be so?"

Fangast agreed, and presently they parted.

In the next issue of the *Chronicle* a paragraph appeared to the effect that it was understood that it had been decided by the Radicals to hold a big meeting in the Market-place at eight o'clock on Monday evening. The paragraph went on to say that it was to be hoped that the authorities would interfere to prevent such a gathering, as it might result in a breach of the peace.

Fangast laughed at Job's cunning, and waited anxiously for Monday to see what would come of the announcement. A few minutes before eight o'clock he strolled in the direction of the Market-place, and to his surprise found the square full of people. Mingling with the crowd he soon found some of his friends, and moved with them towards the fountain which stands in the centre of the Market-place, where some workmen were busy improvising a platform out of butchers' stalls. When this was completed, a rough-looking workman jumped upon it, and proposed that someone should name a chairman. Immediately a voice from the crowd cried out, "Mr. Jerome Fangast." The name was taken up with acclamation, and before Jerome well knew what he was about, he found himself seated on the platform, presiding over the meeting. The meeting proved a great success, and was the forerunner of several others during the ensuing fortnight, which had the effect of materially advancing and strengthening the Radical cause.

During the time that Fangast was so busily occupied with political

affairs, his mind was no less intent upon another subject. On the morning that Miss Softly met Pennyfold at the foot-bridge, the young man happened to be out with his gun, and witnessed the meeting, although unobserved. The sight gave him a great shock, and filled his breast with jealousy. He had long suspected a tenderness on Pennyfold's part for the fair Letitia, but he had no idea that matters had progressed so far. Up to this time he had regarded Jacob's daughter as a certain prize. He admired her, and was greatly flattered by Jacob's selection of him as his son-in-law. But he did not jump at the bait as a less astute young man would have done. Thinking the game was in his hands, he dallied with it, taking time to look at it in all possible lights; and while he decided that Letitia, in the light of heir to Mr. William Softly's wealth, was worth wooing and winning, he thought there was no need for any special hurry.

The meeting near the Priory, however, suddenly put matters in an altogether different aspect. The auctioneer shot no more that day, and it was with feelings of more than common bitterness that he reflected, as he walked home, on his stupidity in letting Drupe, as he thought, steal a march on him. He was angry with himself for not being deeper; he was doubly angry with Pennyfold for having, as he thought, outwitted him; and he was not a little incensed against Letitia for—well for entertaining the affection of a youth so much inferior to himself.

All that day Fangast nursed his vexation, but on the next calmer thoughts supervened. He came to the conclusion that all was not lost. The meeting might have been a simple cousinly affair, although he freely owned that it did not look like it. But even if it were not, he argued, was it so hard a thing to spoil such an attachment? Of one thing he was quite certain, he was not going to be check-mated by the chemist without an effort. The idea of a paltry chemist interfering with his ambitious aims was too absurd for him long to contemplate seriously.

Fangast decided to find out what he could about this disagreeable attachment, and for that purpose approached Mary, Letitia's maid, whom he found sufficiently pliable. From her he learned all that he desired to know, and much more than was agreeable. The information thus obtained showed him that unless he was prepared to give up the game, he must do something to break off the engagement between the cousins.

This was the subject upon which Fangast deliberated so anxiously while he was occupying all his spare time about his political intrigues. But cudgel his brains as he would, he could find but one way to bring about a rupture between the lovers, and that he did not like to resort to. He would have preferred some other means, and he hesitated for some time; but the sight of Letitia and Pennyfold walking home together from church the following Sunday evening finally decided him to cast away his scruples.

His scheme was to throw upon Drupe the suspicion of having had

a hand in his uncle's death or abduction, and he calculated upon doing it so effectually that it would be impossible for Miss Softly to avoid breaking with him.

Diabolical as was the plot, it was not intended that Pennyfold should be injured by it further than was necessary for a rupture of the relations between him and his cousin. The auctioneer thought the effect of the plot might be to cause a coldness between them, which was all he desired. Such a state of feeling once aroused in the young lady's mind, he thought he could trust himself to do the rest. If, he argued, he had not enough wit to make her in love with him when she had broken off her engagement with Drupe, then he did not deserve to have her.

If he had been told, if he had once reflected that he might be putting the young man's life in jeopardy or doing what might cast a lifelong stigma upon him, he would probably have drawn back with horror. But he had no particular consciousness that he was planning a devilish crime; all that his conscience told him was that he was doing an act that he would prefer to keep hidden—in other words, that he was preparing to commit an unpardonable meanness. That it did not appear to him more than that, probably arose from the circumstance that he intended that the act should have only a temporary and circumscribed effect. If we could but limit the effect of our bad actions!

He may probably have justified his act to his conscience, as many had done before him, by that detestable adage, "Everything is fair in love and war"—an adage that has done the ill service of salving over many a conscientious qualm, and of justifying to reputedly Christian minds acts only fit for the diary of a devil.

But by whatever process of reasoning justified, the act was committed; the poisoned arrow was sped, and while it was taking effect the news arrived of the death of Mr. Baldwin, the late senior member for Hydeborough, and within forty-eight hours the town was in the throes of a contested election, although, for appearance sake, no public action was openly taken until after the funeral.

(To be continued.)

Book Notices.

Mental Magic. By THOMAS WELTON, author of "Fascination," "Planchette," &c. London: George Redway, York Street, Covent Garden.

To the curious in things strange and occult, this book should be uncommonly interesting. It purports to be a rationale of thought-reading and its attendant phenomena, and their application to the discovery of new medicines, obscure diseases, correct delineations of character, lost persons and property, mines and springs of water, and all hidden and secret things. The work is edited by Mr. Robert H. Fryar, who adds a treatise on Magnetic Magic.

Facts and Gossip.

THE minds of mesmerists will be somewhat disquieted by a clever invention lately brought out at Paris by Dr. Ochorowicz. By means of this little instrument the inventor asserts that it is possible to discover the hypnotic propensities of any individual. This is done by putting a finger through a tubular magnet, the edges of which have been covered by a piece of soft iron. After two minutes the finger is withdrawn, and, if the patient is a mesmeric subject, symptoms such as involuntary movement, numbness, dryness of the skin of the finger will at once appear, lasting for a few moments. Experiments have proved that about 30 per cent. of mankind can be subjected to mesmeric influences, while on the rest the hypnoscope has no effect. It is a thing to be thankful for that as yet there is no instrument by which to test the more important latent capacities of the human race ; but who knows what may yet be in store for us?

MOST of the fathers of the Church wore and approved the beard. Clement, of Alexandria, says : " Nature adorned man, like a lion, with a beard, as the mark of strength and power." Lactantius, Theodoret, St. Augustine, and St. Cyprian are all eloquent in praise of this characteristic feature, about which many discussions were raised in the early days of the Church, when matters of discipline engaged much of the attention of its leaders. To settle these disputes, at the Fourth Council of Carthage—A.D. 252, Can. 44—it was enacted " that a cleric shall not cherish his hair nor shave his beard." Bingham quotes an early letter in which it is said of one who from a layman had become a clergyman : " His habit, gait, and modest countenance and discourse were all religious ; and agreeably to these, his hair was short and his beard long." A source of dispute between the Roman and Greek Churches has been the subject of wearing and not wearing the beard. The Greek Church has adhered to the decision of the early Church, and refused to admit any shaven saint into its calendar, and thereby condemning the Romish Church for the opposite conduct.

A LARGE, healthy, and equable temperament ought to be able to occupy itself with those questions, the grandeur of which crowds from the mind the multitude of little splenetic emotions, which are like the pricking of poisoned pins. We do not mean to say that a study of logarithms will console the man who is suffering from wounded love, or that a relentless course of logic is a panacea for disappointment and ingratitude. And yet it is true that when the brain is fully absorbed in some work the soreness of the heart ceases for the time to be felt. The question is how to impel a nature not of the strongest to successfully seek this form of distraction. For here it is not the first step only which costs, but every step. The effort

of the will has to be incessant. It has to be sustained in the midst of heart-beatings that will not be stilled, and the probability is that when so many perturbations exist the deflection will be great. Besides, the consolation offered by what is generally called pleasure is much easier. Sensual enjoyment can so readily and cheaply be attained, and, at any rate, while the senses are young and the colours of life are vivid, the temporary relief is certain. Persons of strong and rightly fashioned wills can, of course, easily do what they wish in creating a legitimate self-diversion; but this sort of will does not usually reside, along with lofty intellect, in a nature in which the softer emotions have considerable sway.

M. MARCY, experimenting and studying the march of French soldiers, discovered that low heels have a favourable influence on the pace which a person walks, and that the rhythm of the step has an important influence on the speed. The rhythm was studied by means of an electric bell, actuated by a pendulum of variable length to enable the subject to keep exact time, and the distance travelled was recorded on the odograph by electric signals sent along the line every fifty meters traversed. It was then found that the length of the step increased little until sixty-five steps per minute are taken; it then increases until seventy-five, and afterwards decreases as a higher rhythm is reached. The speed of travel increases with the acceleration of the rhythm up to eighty-five steps per minute, and decreases at higher rhythms.

IN a story which recently appeared in the pages of the PHRENOLOGICAL MAGAZINE a dog is made to perform some surprising feats; and a criticism was made by an interested reader at the time that the canine friend's doings were rather remarkable, not to say incredible. But what would the critic who was so greatly struck by "Beauty's" performances think of the dog which a burglar taught to burgle? Indeed, in these days of over-population and competition a dog without accomplishments is pretty sure to go to the wall just like any other ne'er-do-well. In one of the courts recently it came out that a burglar who was taken into custody with his dog had trained the sagacious beast to assist him in his disreputable profession—small blame to the dog, whose duty it was to keep *cave* and warn his master of danger. The dog was evidently apt, for his master had successfully broken into three houses and made off with many moveables, from spoons and watches to canaries and bird-cages, his dog taking a very important part in the operations.

A NEW use for the frog has been discovered. A medical correspondent of the London *Lancet* says that, finding the treatment of granulating wounds by skin grafting is in country practice liable to fall into disuse through the unwillingness of patients to part with the little bit of skin necessary, he has lately been induced to try experi-

ments with other substances as a substitute for human grafts. As the outcome of these experiments he finds that bits of skin from a decapitated frog make grafts which admirably answer all purposes, forming a source of supply always at hand in the country, except during the winter months, and being easily applied on account of their uniformity in thickness, and necessitating no pain to suffering humanity. The skin of a single frog yields grafts for an enormous extent of surface and preserves its vitality so long that if the patient is at a distance the portion of skin required can be carried by the surgeon in his pocket for an hour or more without injury, provided it is wrapped in waterproof tissues to prevent drying.

THE semi-invalidism that used to be fashionable is now, happily, becoming quite out of date, but there are still a class of women who betake themselves to semi-invalid indulgences on very slight provocation. They make an artistic business of it. They recline gracefully on the sofa in a becoming *negligé* costume, and are served with an invalid's dainties, and the sympathising friends congregate, and the fair one is petted and pitied till a slight indisposition that in nine cases out of ten would have yielded to a pleasant walk or to some other new and bracing influence, becomes really an illness. Of course this does not apply to actual disease; but there is a very large proportion of so-called illness that is really only a matter of imagination and nerves. It is the kind that will yield to the new sanitary treatment of proper food, proper sleep, pleasant walks, and happy thoughts. There are many women who are temperamentally inclined to feeling blue, as they express it. The attack of low spirits comes without known cause, and it is very apt to result in headache and general indisposition for the time. It is a tendency to be faced with courage and common sense and resolution. One may not be able to wholly eradicate the tendency, but any woman of strong will-power can successfully eradicate her giving way to it. Let her recognise it for what it is—a defect of nature—and set herself resolutely to conquer it.

A GOOD share of the inventive talent of the day is given to devising machinery for keeping people honest. The whole idea of mechanical honesty is based upon the theory that the conscience is quite extinct. Years ago various meters and gauges for preventing whisky frauds on the Government were a source of fortune to those lucky enough to get the Government to adopt them, but they did not prevent the frauds. Everywhere one goes nowadays there is the rattle of wheels and the clanging of bells to announce that there is a person near who will take, if he has a chance, what does not belong to him. There is the street car conductor's bell punch; the annunciator that records the number of passengers; the box for the deposit of fares padlocked and inaccessible to the bob-tail car driver; the alarm on the cash drawer which rings whenever it is opened; the

noise and chuck of the artificial cash box running from the salesman to the cashier at the desk in the large retail stores, and this is to be supplanted by a machine which records in large figures the value of every sale, and which without ringing a bell cannot be altered until the next sale is effected. Whether by long habit and the law of heredity these artificial consciences will breed stronger natural ones will be disclosed only to those living enough to watch the experiment.

THE advantages of woollen underclothing, besides its warmth and the closeness of its application, depend upon its better adaptation in respect of temperature to the requirements of climates and to changes of seasons than any other material for dress. It also has a special faculty for absorbing and distributing moisture that makes it particularly salutary next to a perspiring skin. A linen garment will absorb the product of transudation until it is wet and becomes sticky upon a moist and clammy skin, while flannel will rest upon a skin it has nearly dried and be only damp itself. Hence, the body wearing flannel is in the best condition to resist the after chills that follow great perspiration. The irritation caused by flannel which is brought up as an objection against it is an accompaniment only of new flannels and coarse ones, and is generally a merely transient condition.

THERE is not one man in ten who in walking about town does not habitually keep his eyes fixed upon the ground, or at any rate upon the very near distance. There are several excellent reasons for this habit, one of them being that it diminishes one's chances of being run over or bespattered with mud. But, on the other hand, there are several good objections to it, the most important of which was pointed out very clearly in Mr. Brudenell Carter's recent paper at the Society of Arts. There can be no doubt that town life is conducive to short sight. To some extent this is unavoidable, for much of our work is necessarily done upon things quite close to us, and by very defective light. But that is all the more reason why we should shake off the shades of the prison-house when we have the chance, and use our walks abroad to give the eyes that habituation in long sight which they otherwise never get. We should not only improve our eyesight, but we should discover a great many things worth looking at. No one who has not tried has any idea of the difference between "eyes" and "no eyes" in London.

THE enemies of tobacco have won a triumph in the person of General Grant, who has been suffering from a swelling of the tongue. He has been accustomed to smoke twelve or fifteen cigars daily, and on the advice of his physicians abandoned smoking entirely, apparently without the least disturbance to his nervous system, while the improvement in his general condition was marvellous.

POPULARLY, eating at night is thought injurious ; but unless dinner or supper have been late, or the stomach disordered, it is harmless and beneficial—*i.e.*, if one be hungry. Four or five hours having elapsed since the last meal, invalids and the delicate should always eat at bedtime. This seems heretical, but it is not. Food of simple kind will induce sleep. Animals after eating instinctively sleep. Human beings become drowsy after a full meal. Why? Because blood is solicited towards the stomach to supply the juices needed in digestion. Hence the brain receives less blood than during fasting, becomes pale, and the powers become dormant. Sleep therefore ensues. This is physiological. The sinking sensation in sleeplessness is a call for food. Wakefulness often is merely a symptom of hunger. Gratify the desire and you fall asleep. The writer recently was called at 2 a.m. to a lady who assured him that she was dying. The body was warm. The heart doing honest work. To her indignation he ordered buttered bread (hot milk or tea were better) to be eaten at once. Obeying, the moribund lady was soon surprised by a return of life and desire to sleep. The feeble will be stronger at dawn if they eat on going to bed. Fourteen hours lie between supper and breakfast. By that time the fuel of the body has become expended. Consequently the morning toilet fatigues many. Let such eat at bedtime, and take a glass of warm milk or beef-tea before rising; increased vigour will result. "But the stomach must rest." True. Yet when hungry we should eat. Does the infant's stomach rest as long as the adult's? The latter eats less often merely because his food requires more time for digestion. Seldom can one remain awake till half-past ten or eleven in the evening without hunger. Satisfy it and sleep will be sound. During the night give wakeful children food. Sleep will follow. The sick should invariably eat during the night. This is imperative. All night the children and delicate may take warm milk, beef-tea, or oatmeal gruel. Vigorous adults may also eat bread and milk, cold beef, mutton, chicken and bread, raw oysters, all of course in moderation. Do not eat if not hungry. Eat if you are.

A RECENT number of the *Cornhill Magazine* contains an article on Charles Dickens, with especial reference to his relation with children, by his eldest daughter. Among other interesting recollections we find the following: "Among his many attributes, that of a doctor must not be forgotten. He was invaluable in a sick room, or in any sudden emergency; always quiet, always cheerful, always useful and skilful, always doing the right thing, so that his very presence seemed to bring comfort and help. From his children's earliest days his visits, during any time of sickness, were eagerly longed for and believed in, as doing more good than those even of the doctor himself. He had a curiously magnetic and sympathetic hand, and his touch was wonderfully soothing and quieting. As a mesmerist he possessed great power, which he used, most successfully, in many cases of great pain and distress.

THERE is a great clamour for the “practical” in education. Schools are wanted to teach boys and girls to “do” all sorts of things. Trade, mechanics, making money—this seems to be the popular demand of school teaching. Sometimes we think this is carried too far. Man is not wholly practical, nor a mere working machine. The soul needs culture as well as the fingers. To make the world happy, somebody must write rhymes and romances while others spin cotton. We need dreamers of dreams as well as earners of bread and butter. In looking after the practical too sharply, we are in danger of neglecting the best culture, that is the heart.

Answers to Correspondents.

[Persons sending photographs for remarks on their character under this heading must observe the following conditions :—Each photograph must be accompanied by a stamped and directed envelope, for the return of the photographs; the photograph, or photographs (for, where possible, two should be sent, one giving a front, the other a side view), must be good and recent; and, lastly, each application must be accompanied by a remittance (in stamps) of 3s. 6d., for six months' subscription to the MAGAZINE.—ED. P. M.]

T. B. W. (Carnforth).—The case you mention is a serious one. The woman should have medical advice at once. You might receive some useful hints by writing to a medical paper.

M. S. S. (Belfast).—You have a practical mind. Your brain is intensely active, and all your powers tell advantageously. Some of your small faculties are more active than many larger qualities in other people. Your last photograph indicates that you have developed much during the last few years. You study the utility of things now much more than you used to. You are thrifty and neat about your work, and wide-awake to all that is going on around you. You know how to make a little go a great way, and always cut your garment according to your cloth. You are not wasteful with anything, and are practical in your way of helping others. You never give your money to an idle beggar. You know how to utilize time and energy as well as wealth or property. You are plucky, and take right hold of a piece of work with hearty interest, and a stout resolution to succeed. You are more inclined to be hopeful and sanguine in the midst of difficulties than nine persons out of ten. You must avoid working too hard to injure your health.

H. W. G. (Bishop's Stortford).—You are known for your manly independence. No one will dare to trifle with your rights more than once. You mind your own business and expect others to do the same. You are firm and persevering when you have decided upon a certain course. You show very little fear or timidity, in fact,

you fail to understand how many people can be so anxious and solicitous about future results, and so cautious about venturing on new ground. You have taste, and like your things done just so. Your general ideas are practical about things pertaining to every-day life. You ought to be a good marksman, and enjoy highly outdoor sports. You would make one of the leading and most skilful members of a lawn tennis, archery, or cricket club. You early learned to esteem your own opinion on matters and things, and are always anxious to create a feeling of respect in others for your own character and position.

QUEEN BESS (Kettering).—You have an exquisite type of mind; nothing can be too highly finished off or polished to meet with your appreciation. The more highly perfected a thing is the better you like it. You are fond of idealising things by your imagination and fancy; it is harder for you to descend to every-day life than for many. You have a sharp development of mental curiosity. You delight to investigate new principles, theories, and ideas, and reason from cause to effect. You are exceedingly kind and tender-hearted, sympathetic, generous, and loving in your disposition. Ought to succeed in music, and some of the other arts; are quite sensitive to criticism, and ambitious to do your best, make a favourable impression, and please your friends.

STUDIOUS (Southport).—You have a large and active brain, joined to an energetic and plucky character. You are quite ambitious, yet do not allow your ambition to run you into extravagance. Your Acquisitiveness keeps you mindful of the necessity of providing for the future. You are ingenious, and ought to be able to turn your constructive power to some practical use. Order and Comparison, both being large, should aid dexterity in workmanship of some particular or exacting trade. You are excellent in remembering places, and have the elements to succeed as a commercial man. Language being fully developed, joined to your active, planning, and reasoning mind, enables you to express your ideas forcibly, and generally please those whom you are entertaining or doing business with. You are short of verbal memory—memory of isolated facts and events, but possess a remarkable memory of the form, size, weight, magnitude, locality, or order of a thing. You are a student of character, and should improve all your opportunities in this direction. Avoid being so cautious as to keep you from entertaining new enterprises, if the latter come your way.

A. (C. Y. U.).—This is a striking development. The body, however, is not so well built for strength and endurance as the mind for activity and grasp. The reflective, imaginative, and spiritual powers are very great. The man should be an artist, a poet, or writer. There is oratory, too, in his grasp; but it will not come out so naturally or so easily as the other powers. The observing, recording

faculties are not so good : should be exercised and cultivated. Very unselfish in regard to property ; but very exigent in regard to things of honour. Can be a very good man or a very bad man ; but his badness would only come from ill-treatment, injustice, and tyranny. It would require a whole volume to delineate his entire character.

THOMAS T. (Leicester).—This photograph indicates that the original has a high order of ambition, and is on the look out for some chance to immortalise himself ; he is ready for action, and only wants to know what he can do. He has high hopes, is always looking ahead, and considers the present only a pastime to a more important future. He has no indications of eccentricity, yet possesses a strongly-marked character. He has plenty of will-power, and determination of mind, and by nature possesses moral principle enough to give him an established character and elevated motives. He is inclined to public life, and is qualified by nature for some public sphere. He can trade and do business ; learn a trade as a mechanic, or be a farmer, but would prefer a profession, and come in contact with the world, and help to shape the destiny of the nation. He is sagacious, and has an available mind. Could make a lawyer, a teacher, or a manager and overseer.

F. P.—This photograph indicates that the lady comes from a family possessing more than ordinary intellectual ability, general energy, and strength of constitution. She derives the stamp of her mind from the masculine side, and is equal to any profession and position generally allotted to men. She should be known for her judgment, originality of mind, power to plan, take the lead, and be a manager or matron in some public institution. Her perceptive faculties are comparatively good, but she is more noted for her originality of mind and powers to think. She has versatility of talent, could plan a house, superintend workmen, and is seldom at a loss for a way to accomplish her end. She has ready wit, and quickly responds to the joke or lively remark. She will retain her youthfulness of mind into old age, and has a favourable faculty for making herself agreeable to her customers or friends, yet is not so remarkable for her talent to talk as to think and plan. She has more than average energy, and is able to sustain herself in the midst of great trials and complicated difficulties. She is decidedly industrious, economical, and capable of keeping her own counsels. She is very particular in her friendships, stands by her friends through thick and thin, so long as they prove true.

D. A. P.—This young man has so much genius that he is puzzled to know what to do with it ; can do many different things equally well ; is more inclined to music, art, or mechanics, than almost anything else. He has abilities for a salesman and a bookkeeper. He delights to entertain company ; has plenty to say, for his general memory is good. He is disposed to be very neat, careful, systematic, and particular about what he does. He has considerable ability in

discerning colours, in arranging various matters connected with a variety shop, a library, or a museum. He has a discriminating intellect, is quick to take a hint, and readily takes stock of the character of persons he sees. His sympathies enable him to throw his whole soul into what he does, so that he is rather inspiring and entertaining either in company or business. He is not a cool, calculating philosopher, but he is an ardent, earnest man in his cause. He is capable of great admiration for beauty and perfection. So near as can be judged he has a youthful, bland mind, and sufficient of the moral brain to regulate his conduct, yet ambition will tempt him to the full extent of his moral courage to regulate.

D. T. P. is very social, companionable, loving, and domestic. He is, and always will be, deeply interested in the welfare of society. If he is wise in selecting his friends and in regulating his social and domestic nature, he will probably be successful in every department of life, but he is in danger of allowing his affections and his sympathies to so monopolize, that other persons would be liable to take advantage. He is almost too willing to render service, to do for others, and to make himself useful ; it will come to this in the end, that he will devote himself to some sphere of life where others will be benefited as much as himself. He could not very well be content simply to accumulate property or devote himself to business. He might take an interest in farming, stock-growing, and horticulture, for he is a great lover of animals, pets, children, home, and friends. He has abilities for a teacher or preacher, and as a doctor he would excel—as a family doctor. His intellectual powers are of the practical and available type. He should devote himself to the acquiring of as much general knowledge of nature and human nature as possible, and thus strive to make himself useful by the application of that knowledge, for he has a good faculty to make everything plain, clear, and easily understood. He will be forcible rather than copious in speech ; he is almost too confiding, and thinks everybody honest. Will be liable to get a great amount of other people's work on hand, and do what other persons ought to do themselves.

PARCH (Aberdare).—You possess a remarkable organization ; are capable of enduring much mental as well as physical fatigue. You have an active mental temperament with a strong degree of the motive. The latter gives strength and toughness to your constitution, while the former aids mental perception, and gives vigour and keen foresight. You are a utilitarian and a practical observer of everything ; a man of definite knowledge, and also an original thinker and planner. You first observe, then reflect, and are a great student of human nature and character. You reason intuitively and generally find your conclusions correct. You have strong powers of comparison, and delight to weigh things mentally. You draw apt conclusions, see the fitness of things, and are a good judge of the quality as well as the place, number, size, and appropriateness of all

materials that make up nature. You have a large organ of mirthfulness, and are full of dry jokes and odd stories. Are a practical philanthropist, and an educator of the people around you. You show taste and refinement, but your first question always is, "What is the use of the thing?" You make yourself at home with strangers, and take pleasure in entertaining company.

R. G. W. S. (Dorset).—Your head is high and narrow, hence you will be known more for your aspiring, generous cast of mind than for your business tact or enterprise. You know how to do nice kinds of work, but you would find it difficult to steer a great financial concern clear of debt. You are too easy, pliable, and generous, and cannot say "No" when asked to do a thing, even when your own interests incline you to do so. Veneration appears to be fully represented, which makes you conscious of the superiority of others. You are not so hard on the sinner as many, and are rather inclined to forgive a wrong than punish a first offence. You have a great appreciation of and a good ear for music and the harmonious combination of instrumental and vocal sounds. You appreciate the sublime and grand in nature, art, and oratory, and the beautiful in poetry. You ought to be placed above pecuniary difficulties, but however much property you enjoyed, the greater half would be sure to go to help others. Rather wanting in pluck, energy, and power to ward off encroachments, and allow others to take undue advantage of you. You possess good powers to imitate and reproduce what you have heard.

J. D. W. (Swansea).—You have a very susceptible mind, are brim-full of loving sympathy for others. You will be known for your refined tastes and your love for whatever is beautiful, poetic, and artistic. You have a very inquiring mind, are fond of reading, and are always asking questions to gratify your thirst for knowledge. You think and dream with your eyes open a great deal of your time, especially when alone. You must guard against allowing your mind to soar in wonderland too much, and study more the practical affairs of life. You could succeed well as a teacher or writer. You readily understand first principles, and grasp new ideas. You are a first-rate planner, and know how to arrange means to ends. Are a little too good to enter into and enjoy the rub and push of the world as it rushes along. More energy, pluck, economy, and tact would be advantageous in helping you to better combine your spiritual ideas with your material ones, your ideal conceptions with what is practical and tangible. You are keenly alive to the wants of the tender, helpless, and aged, and take delight in ministering to their needs. You will make a loving, devoted, conscientious wife provided your husband thoroughly understands you. Your ambition will take the form of family pride, and a desire to do all things well.

THE Phrenological Magazine.

MAY, 1885.

GROVER CLEVELAND, PRESIDENT OF THE
UNITED STATES.



HE organization of this gentleman is most remarkable; he possesses an unusual amount of animal and vital force, and is capable of enjoying physical existence in the highest degree. It is almost impossible for him to work off his vitality so as to feel quiet and contented with common physical labour. He appears to have great muscular strength, and has had at one time a powerful frame. He is able to go through and endure more than many, but his organization does not indicate at present so much muscular strength and love for pure physical exercise as it does for a more quiet employment.

He would not like continual physical labour, yet for the time being could put forth great physical strength. All his vital functions, and all the secretions of his system, are most powerful. He has large lungs, and easily vitalizes his blood; he has strong power of digestion, and is disposed to look well after the inner man. He has a large neck, which indicates great strength and physical force. The entire base of his brain is large, which favours animal life. He is capable of enjoying all that belongs to physical existence. He has all the physical properties of a superior man, and had we a race of such men posterity would be greatly changed. His social nature is strongly represented, yet his attachments to persons are not so strong as to bias his judgment. His love centres mainly on woman; he may form some attachments among men, but generally his interest in men is based on his sympathies, or favourable relations that may exist between him and them. He is adapted to enjoy female society highly; few have the indications of a stronger love-nature than he has, and it is powerfully sustained by his temperament and general organization.

His head is fairly developed in the crown to give general manliness, pride, and self-respect; but he needs all he has

to keep up his dignity and to restrain his impulses. He will appear to a better advantage where there is opposition than where there is none. He is more in his element where there is peace than war; he is easily influenced through friendship, but he has a strength of nature that can resist powerful influences, and hold his own in spite of entreaties and circumstances. He may not be quick to decide, but has great perseverance and determination of mind when he has once decided.

He is reverential, respectful, mindful of the presence of superiors, and pays due deference where deserved; and is not over radical or liable to offend by imprudent remarks.

He has the elements of kindness and sympathy, and is rather easily affected by gentle treatment. He will show a comparatively elevated tone of mind, and has rather high aspirations; yet he has a temperament that is difficult to control, so that he struggles more to overcome the tendencies of his physical nature than most men. His spiritual nature is not defective; he is not wanting in the element of hope and in the sense of justice; their influence, however, may not be so uniform and controlling as they would be with a different physical structure.

He is remarkable for the development of his perceptive intellect, his knowledge of men and things, and his power to attend to many different kinds of business and to turn off business with dispatch. He has a superior memory of what he has ever done or experienced, and is not confused by having a great variety of business to do; he can resort to expediency and make one hand wash the other, or accomplish more with fewer tools than many. He has all the qualities necessary for a scientific man, or for a business that requires great variety of knowledge. He has large Order, which gives sense of arrangement and method, and hence is able to map out his work and plan beforehand what he wants to do. His powers of comparison are great; he readily sees the fitness of things and the adaptation of one thing to another; is quick to see the bearing of a subject, and to draw correct conclusions; is remarkably intuitive in discerning what is true in nature or what is false; takes stock of men quickly and correctly, and knows how to make such selections of men as he wants for particular purposes. He would do well to have the charge of men, so as to organize them and put each one in his place. He may not be given to abstract reasoning, to argument and philosophy, but would be more known for his sagacity and intuitive powers. He can enjoy practical joking, but is not much given to general wit. He has favourable

constructive talent, which would enable him to do a great variety of work if necessary.

Acquisitiveness and Secretiveness are rather large, which give him an eye to business, and incline him to the exercise of tact and management when necessary, and he is usually cautious and guarded about committing himself; but with such an organization he would require a large salary, and plenty of handy money to gratify his wants. He will not be



the first to show fight; is capable of having great control over his temper and prejudices, yet, should he give vent to his temper, the best thing for others to do would be to get out of his way and give him plenty of room.

All things considered, Mr. Cleveland is a great power by himself; not because he has so large a brain, but because the kind of brain he has is powerfully supported by his body and the class of capacities he has are of the executive, positive, and practical kind; for he has both executive and

administrative ability in his large perceptive faculties and heavy base to the brain. L. N. F.

Mr. Grover Cleveland is the son of a Presbyterian minister, who was not greatly blessed with this world's goods ; consequently young Cleveland had to look out for himself. He did what came to his hands to do, and went from one thing to another, till finally he anchored at Buffalo, N. Y., when on his way to Cleveland, Ohio. While in Buffalo he commenced the study of law, and having graduated, opened an office in Buffalo. He was very successful, and became popular. He was in time chosen sheriff of the county, and by manifesting considerable pluck on a few occasions in removing certain abuses, he was elected Governor of the State of New York, in which office he became more and more popular, and proved himself to have more than ordinary administrative ability, and among all the old and young democrats of the country he was preferred, nominated, and elected as President of the United States. His own party probably was not strong enough to have elected him, but many of the Republicans saw in him qualities they liked better than those of their own Republican candidate, and so went over and voted the democratic ticket.

If Mr. Cleveland continues to be as wise and judicious as he has started, he will draw from both parties support enough to form a new independent party, full of warm blood and reformatory spirit, and will start a new order of things, leaving the old fossils on both sides out in the cold.

Mr. Cleveland, like John Bunyan, has a powerful nature to get in subjection to his highest nature, yet when that is done he will make one of the most powerful and influential men in the country.

THE NATURE OF CONSCIENCE.

BY SAMUEL EADON, M.A., M.D., Ph. D.

Is there such a faculty as conscience? If there be, is it simple or complex? If so, is it an intellectual state of mind, or an emotional? or, is it a vivid emotion, more or less intense, rising, of necessity, by a law of mind in sequence on the antecedence of a certain intellectual act of approbation or disapprobation on the presentment of actions, the outcome of the moral sentiments? Whether this state of mind is simple or complex, it must be admitted, on all hands, that the feelings of remorse and self-approbation are common to

man; and the question naturally arises, what is its source, and, if complex, what are its constituent elements?

Some writers, as Dr. Thomas Reid, and Dugald Stewart, understand by Conscience, the faculty of judgment or reason (identical faculties according to these writers) exercised on actions related to the moral powers in order to ascertain the right or the wrong of such actions. If this be the case, conscience is an intellectual act of which judgment or reason is the cause or guiding principle; so that the operations of reason (reasoning) and the operations of conscience (remorse) are one and the same thing. This cannot be. Surely conscience is something more than the passing of a judgment on man's actions, good or bad. A similar view was held by Dr. Wardlaw in the first edition of his "Christian Ethics," but, in consequence of the attack of Dr. Payne, in the next edition, the rise of a *feeling*, following the decisions of judgment or reason, was reluctantly admitted by the doctor as an element in what is understood by the term conscience. "Judgment, or reason," says Sir James Mackintosh, "may be *preparatory* to the rise of the emotion (of remorse), but cannot be a part of it"; and this should be borne in mind, that the decisions of judgment have reference to *others* as well as to *ourselves*; whilst the *subsequent emotion*—remorse—is confined strictly to *our own bosom*, and cannot be transferred to *that* of another. Judgment condemns equally an act committed by ourselves and by our friend; but the feeling of remorse is purely a self-felt emotion. The feeling belongs to *ourselves alone*, and cannot extend itself to our friend. Towards him our feelings are more those of condemnation and of sorrow for the wrong done than aught else. The decisions of judgment on actions of a moral nature may be a correct guide to tell us what is right and what is wrong; but there seems to require a something more—an IMPULSIVE ACTION—the feeling of remorse, to secure the *doing* or the *non-doing* of that which judgment tells us we ought to do (*quid oportet*); or that which we ought not to do (*quid non oportet*); and this chastising or approving principle (as Dr. Chalmers called it) is none other than this vicegerent of God in the human soul—conscience. The function of conscience is not only to decide on the right or the wrong of human actions, but also to *reward* with self-approval or to *punish* with remorse good or bad deeds as the case may be.

Conscience, then, seems to be a susceptibility or receptivity of experiencing the emotion of remorse or of self-approval, in sequence to the exercise of judgment or reason, which previously had decided upon the action as right or

wrong. In other words, in its final results, conscience is the rewarder of virtue when judgment has passed a sentence of approval; and a punisher of vice when the sentence pronounced is unfavourable.

If conscience were, according to Reid and Stewart and Wardlaw, a mere act of judgment, "What," asks Sir James Mackintosh, "is the feeling of remorse? Why do we feel shame? Whence indignation against injustice?" According to the constitution of the human mind, these emotions cannot arise from the exercise of judgment or reason *per se*; and, consequently, another power or susceptibility must come into play to give rise to the emotions of remorse or of self-approbation.

Now, the question is, does the term conscience stand as the symbol of *one state* of mind, viz., an operation of judgment; or, is it a compound word, expressive of *two* or more states of mind, and consequently capable of analysis? We have endeavoured to show that it cannot be judgment or reason *alone*. Is it the condemning or approving emotion *alone*? or are both mental states necessary. The first, judgment, to approve or condemn the act; and the second, the rise of the vivid feeling of remorse or approval in immediate sequence? Of the two elements in the complex notion, the emotion following the intellectual act seems more in harmony with the common feeling of what is generally understood by the upbraiding of conscience, than the mere approval or condemnation of the act by judgment or reason. Perhaps the emotion of remorse cannot spring up till judgment has pronounced its decision for or against. In that case, conscience is a complex feeling made up of an emotion of remorse, necessarily preceded by an act of judgment on actions presented to it.

Whatever the elements of the analysis may be, conscience cannot awaken a feeling of *remorse* against others similar to that felt by ourselves. Towards others the feeling is one of indignation, or complacency, as the act is good or bad, and very different from what we ourselves feel. It is our own tormentor gnawing out every atom of previously accumulated happiness till nothing is left for us but black despair.

Conscience, then, is something more than an approval or condemnation of actions by judgment or reason, according to Reid, Stewart, and Wardlaw, whatever those vague words may mean; but whether it is the act of *judgment alone*, or the *condemning emotion* alone, or the rise of both in necessary sequence, it is not easy to say.

Dr. Thomas Brown, the distinguished professor of moral philosophy in the University of Edinburgh, and, perhaps, the greatest analytical genius that has appeared since the days of Aristotle, has reduced all the intellectual phenomena to one grand generalization, called by him, "RELATIVE SUGGESTION," and all the other internal affections also, into three orders of emotions, viz., immediate, retrospective, and prospective. According to these views and nomenclature, the analysis of conscience will be as follows:—The first constituent of the complex notion is a *relation* of right or wrong as the result of "*Relative Suggestion*"; the second, the consequent rise of a *retrospective* emotion of remorse, intensified by the suggestions of the memory of the wicked deed. The one tells the right and the wrong of the act; the other, remorse, springs up as a warning not to do it again; that is the *quid oportet*, and the *quid non oportet*; this, either the lash of the scorpion or the feathery rod of love bidding us avoid the wrong and always to follow the right.

Such is the metaphysic of conscience, according to the school of *pure mental science*. Transcendent genius stops at this point, whether it be Cudworth, or Hutcheson, or Reid, or Stewart, or Kaimes, or Payne, or the illustrious Dr. Thomas Brown. Following a wrong path they all arrived at a rock of adamant, composed partly of truth and partly of error, which, singly or collectively, they could neither penetrate nor overleap. None of them could tell why in some human beings there was little, if any, feeling of *remorse* on the committal of crime; and why in others life was rendered so intolerable that they could meet their dooms not only with calm content but without any dread or fear at all.

This abnormality of manifestation in human nature was left for phrenology to explain. Taking up the metaphysical thread, phrenologists, following the Baconian method of induction, and taking the brain, with its marvellous organization, as the instrument by which the spirit of man feels and thinks, and makes its behests known in this life, are able, satisfactorily, to account for the phenomena of conscience in all its phases of ever-varied manifestation, as seen in society at large.

THE PHRENOLOGICAL VIEW OF CONSCIENCE.

When we think of the spirit of man (commonly called mind), and refer to its capabilities of action, we use the words *power* and *susceptibility*: the one, expressive of an inherent principle to influence things without it; the other, an inherent receptivity to be acted upon by things from

without. When we speak of organs we mean certain parts of the brain, which a wise induction has demonstrated to be the special parts of the cerebral convolutions through which, and by which, the "powers" and the "susceptibilities" of the spirit manifest their different energies during the present state of things. Now, the organs by which to make known the intellectual powers and susceptibilities of the inner man are Causality, Comparison, and Wit; the latter, by its power of tracing out the *relations of difference* in all objects of contemplation, has been very properly considered the organ of Genius, that power by which new discoveries are chiefly made, and the chariot wheels of civilization are kept constantly a-going for the benefit of universal man.

These three intellectual organs, or faculties, are called by Dr. Reid, in their combined action, "Judgment"; by Dugald Stewart, "Reason"; and by Locke, "The Understanding": the functions of each differing, according to these writers, almost as much as the nomenclature varies. Phrenologically speaking, "Judgment" is not a separate or original power of mind *per se*; neither is it a separate faculty, according to the philosophy of Dr. Brown, but merely a mode of action of the three intellectual organs in the former case, and a mode of "Simple Suggestion" in the latter. Two objects come before us—say, a picture and the original—a comparison takes place; a *relation* between the two springs up; this is "Judgment." Suppose the objects of comparison were two actions which relate more or less to the "Moral Sentiments," a notion of *relation* arises as to their morals, by the law of suggestion, and this is called judgment or reason. This so-called separate faculty is, in fact, merely the suggestion of a *relation* between any two things which, of necessity, rises in the mind, and is neither a separate "Organ" nor a separate "Faculty" *per se*, in any sense whatever.

Now, the notion of approbation or disapprobation arises from the exercise of one or other of the intellectual organs previously referred to—viz., Comparison, Causality, and Wit—in respect of actions bearing on the moral sentiments; and the so-called faculty of judgment is *only a mode of action of these organs, i.e.*, it suggests a *relation* of some kind between certain classes of objects, and that alone is its function. The feeling rises into action by the law of suggestion, and the relation thus formed is the judgment of the action as to its being right or wrong.

Then, the first step in the process of analysing the complex idea of conscience consists in the exercise of the three intellectual organs alluded to, in reference to one or other of the

moral organs, by the suggestion of a *relation* of right or wrong necessarily springing up on certain conditions.

As to results, we are no nearer to the light of truth than when the metaphysical sun shone upon us with its brilliant but delusive rays. There, is, however, one advantage gained, we now know the *very orbs* from which these several related rays of truth-light proceed, which before were mere speculations in the old heaven of metaphysical research.

We now proceed to consider the other element in the complex notion of conscience—the emotional—viz., the rise of the dreadful feeling of remorse, or the pleasing emotion of self-approval, in sequence of the decisions of one or more of these three intellectual organs.

It is considered, by writers of the phrenological school of thought, that that part of the brain known as the organ of Conscientiousness, “situated in the posterior and lateral parts of the brain, upwards from Cautiousness, and backwards from Hope,” is the fountain-head whence flows the streamlets of emotion. Not only the size of organ but fineness of cerebral texture, determines the feebleness or vividness of this retrospective emotion. If the organ is small, and the texture of the brain coarse, the feeling of remorse (conscience) will be feeble of manifestation, or hardly show itself at all. This organ, whether large or small, or of fine or coarse texture, will be modified and influenced in action by other contiguous organs which are large or small. For example, Bellingham, who murdered Mr. Percival, the Prime Minister of England, had both Conscientiousness and Benevolence very small, and, consequently, remorse, with such an organization as this, could not spring up, under the most favourable conditions for manifestation. No divining rod of wickedness could detect the waters of remorse flowing unseen, in any part of the cerebral domain; with him the maxim is exemplified to the life—“*Ex nihilo nihil fit.*”

Haggart, who murdered the jailor of Dumfries, had small Conscientiousness, but larger Benevolence, and he felt great regret after the deed was done. The blood, after the act, would flow from the *gratified* organ to the large organ that had not been called into action (Benevolence); a kindly feeling would arise; and hence his intense regret and deep grief at what had been done.

John Rotherham, who murdered a servant-girl on the high-road without any other motive than merely to gratify a sudden and wanton impulse of the organ of Destructiveness, when apprehended, confessed at once, “and courted punishment as the only means of assuaging the remorse” with

which his mind was devoured. This man had enormous Destructiveness, a moderately developed Conscientiousness, with large Benevolence.

James Gordon, who murdered the pedlar-boy on Eskdale Muir, had Conscientiousness small, and Destructiveness inordinately large, with large Secretiveness. He was not only a murderer but a born liar, and the truth was not in him. He abused the judge and jury for condemning him; but before his execution he confessed that his sentence was just.

The difference in size of organ and fineness or coarseness in texture of brain will account for all the differences in intensity or feebleness of manifestation of the emotion of remorse as seen in society. Persons with large Conscientiousness will have a "conscience void of offence"; and if, at the same time, the coronal region of the brain is well developed, they will be, in the language of St. Paul, "a law unto themselves."

On these principles of mento-cerebral philosophy, the feebleness or vividness of remorse (conscience), can be satisfactorily accounted for.

The inferences to be drawn from the foregoing investigations are, that conscience is not a simple, original, or undecomposed principle of human nature, but a complex state of mind, one element of which is intellectual, the other emotional: that Comparison, Causality, and the differential organ Wit, (so-called), each in its own appropriate sphere, determines the right and the wrong of actions: that the emotion of remorse rises into action, in sequence of the decisions of the intellectual organs or faculties, with a vividness or feebleness, according to the size and cerebral fineness of texture of the organ of Conscientiousness: that, with some men, the memories of former wickednesses blend with, and intensify the feelings of remorse to such a maddening state of frenzy, as to make the pangs of conscience so intolerable, that death itself is a welcome messenger of relief from the horrors and sufferings of such a mental hell.

THE COMBINATION AND GROUPING OF ORGANS.

CHARACTER is made up by a gradual unfolding of the mind, and the blending action of the different faculties as a whole, or a combined action of a limited number of faculties to do certain things. The infant has no character, but is governed

by simple wants requiring the action of single functions of body or mind. As it approaches seven years of age, however, it begins to have some combination and complication of ideas, and is interested in seeing things and parts put together, and tries to do simple things itself. First it counts things, then divides them, then multiplies or subtracts from them, and so becomes acquainted with numbers, and finally with simple and pure mathematics. At first the child makes straight lines, or tries to, and then curved ones, at one end or both, then a circle; it makes a v, then puts two v's together and makes a w; then it makes a triangle, then a square, and so on till it learns or can learn how to make all the geometrical figures.

The boy's curiosity to see is gradually increased until he wants to see everything, and go everywhere to see new things; and if taught to see correctly, he in time acquires a great amount of knowledge. His curiosity to see increases his desire to talk and see things done; hence, he says: "Let me see; I want to see; What are you doing? What is that? What is that for? What makes you do that so? What makes the watch go, and the engine pull the load?" And so he goes on looking and inquiring until he succeeds in making watches and engines himself. He piles up his blocks in all sorts of ways to suit his fancy until he wants to build a house, which he tries to draw a plan of on his slate, which eventually results in his being an architect and builder.

All the letters are learned one by one, and the child thinks he has done great things to say all the letters without making a mistake; but a greater difficulty comes when he begins to put these letters together to make even short words of one syllable, and then compounded of many syllables; still all this is mastered in time, and reading is a great pleasure. His first ideas are very simple, such as fire is hot, and wood and coal burn; and he wants to know why they burn, and what makes the heat, until in time he learns the philosophy and source of heat. He eats, and sees himself grow; he puts seeds into the soil, and in time they grow, and flowers and fruit come if planted under certain conditions, but planted in dry sand they do not grow. This leads to the inquiry *why?* and may result in a general knowledge of horticulture and agriculture.

After a few years of looking, doing things, and asking questions, the boy begins to think for himself, and have ideas of his own, to understand complicated subjects, and so goes on into manhood, and becomes learned, and a teacher of philosophy, and has a character of his own.

At first the child has no control over its body or mind, and gives unrestrained vent to its likes and dislikes, and will cry in prayer-time as quickly as at any other; but in long years of tried discipline and experience, after the boy or girl has reached manhood or womanhood, he or she learns to put a curb on temper, passion, appetite, and selfishness. An infant is perfectly prodigal, and would destroy a hundred pound watch with as little concern, to find out what makes it tick, as it would a penny whistle. At first the boy wants and claims everything, and only slowly learns the difference between mine and thine, and the greater value of one thing to another, and thus takes better care of that which he likes best; and not only saves but adds to, and by-and-by becomes economical and rich. So it is by a long process of observation, experience, and increasing desires and wants, that he learns to use his various faculties, and gratify his different wants in a reasonable manner.

At first the youth takes very limited views of things and subjects, and sees only one application of a simple principle, but in process of time his ideas are more numerous and complicated, and sees more various applications of the principle.

The child learns gradually to govern his temper, regulate his appetite and selfishness; guide his love, and cultivate his intellectual and moral faculties; and his character is being formed as a whole, or in sections, in proportion as he controls and guides the different functions of his nature. Human development and the formation of character are slow at best, nor, with few exceptions, are they very perfect, stable, or reliable. Strong powers of body or mind that are first called into action are at the foundation of the formation of character. As the functions of the body have a powerful influence on the mind, so the different faculties have a still more powerful influence on each other.

Physiognomy is of great service in indicating some points of character. A few illustrations will serve to explain. A large, straight nose, with a retreating chin and forehead, do not go with strength of constitution or originality of mind. A large mouth, with full lips, and wide-a-woke projecting eyes, indicate a talker. A brain set back and large behind the ears, and small in front and small in the coronal region, with a large projecting face, indicates a low, animal type of mind. A large neck and face, with coarse, heavy features, with a head smaller in proportion, indicate a mind averse to study, thought, improvement, reform, or benevolent enterprises, especially where personal sacrifices are required. A person with a predominance of the mental temperament and

brain power, with a high, upright, and coronal brain, will be given to study and general improvement. A person who is high in the crown, with a narrow, retreating forehead, and a heavy base to the brain, and a large, stiff neck, will show the elements of a tyrant. A natural born philanthropist will have the vital and mental temperaments, and a narrow, long, high head, and especially a high forehead. Such persons will also be disposed to teach and help others.

A person with a low, broad, short head, is anxious to accumulate property, and will only let go when death loosens his grasp. A full eye and a long eyebrow, and a prominent outer corner to the eyebrow, indicate great powers of observation, and a strong desire to study nature and science ; and if the eyebrow is projecting there will be a capacity for mathematics, art, and business. A person with full temples, and a high, broad forehead, will be musical, ingenious, and given to scheming and contriving new modes of doing things ; and will be disposed to think, theorise, invent, combine principles, and try to account for everything. A coarse, gross organization, with a wide head from ear to ear, will be more carnivorous than herbivorous. A narrow head, with the ears high, and a refined temperament, will be more herbivorous. A person with small, dark, deep-sunken eyes, with a vigorous, impulsive temperament, will give off condensed thought and feeling in short sentences and vigorous language. Projecting ears, standing out from the head, with a large orifice, and a fully developed speaking eye, indicate the power to recite verbatim and repeat correctly. A large back portion of the head, with a rather small, or small and narrow front portion, indicate local attachments, and a domestic, stationary state of mind. A small, short head behind the ears, and high in the crown, broad at the base, and narrow above, with a large lower part of the forehead, and a desire to travel and go all over the world, and come in contact with everything, go together. An irregularly formed body, imperfectly formed features, and an uneven head, and a desire one-sided, peculiar, eccentric character, go together. Thin skin, fine, bright hair, small features and bones, bright blue or hazel eyes, betoken a tender, susceptible, active, wide-a-wake, earnest, and intense state of mind, and a tender, delicate body. Thick skin, veins out of sight, coarse black wiry hair, rough harsh features, large face, bones, and joints, and black eyes, indicate a slow, coarse, blunt, low, rough state of mind—one difficult to cultivate. Such persons usually have a strong, tough, enduring constitution, and are not very susceptible to great pleasure or pain, and their enjoyments will be physical rather than

spiritual. One with a predominance of the digestive system will be easy, elastic, and graceful in motion, fond of pleasure and luxury; will have a pliable nature, and will show versatility of talent, character, tastes, expression, likes and dislikes, and will have longings for what he has not, will be always wanting more, and be very susceptible to excitement and alimentive pleasure.

The phrenological organs in the base of the brain begin to manifest themselves first. Individuality, at the root of the nose, wants to see things. Eventuality, directly above it, wants to see things in action. Comparison, directly above that, wants to compare actions. Causality, on each side of Comparison, wants to know the cause of action. Form, Size, Weight, Colour, Order, and Calculation, are delighted to see the things appropriate to their functions, and are properly arranged and adapted to each other, so as to please the eye and show proper fitness and arrangement. The faculties acting with Constructiveness, and other organs, make many useful and ornamental things, and bring system out of confusion. Language is one of the mediums by which the different faculties express themselves. The most active faculties talk the most. Ignorant and uneducated people use language and speak words that are in harmony with their tone of mind. Anger and prejudice use strong, provoking language and words. Love uses soft, smooth, gentle words. Educated people use words appropriate to the ideas they wish to express. Highly-organized and refined people use refined and delicate language, so different from low, coarse, ignorant people, that the one can scarcely understand the other. Spiritually-minded people talk about heavenly things, while wordly-minded people talk about money. At first short, simple words are used; but as the mind becomes more developed, and the ideas are more complicated, compound words of more meaning are used. Each faculty has a tone and quality of its own, and uses a language peculiar to its own nature; hence some are always talking about themselves, others talk about their friends. Some talk about their possessions and pleasures here, and others about those connected with a hereafter. Large Language, a highly mental temperament, and little restraint, disposes a person to be a great talker, if social and ambitious. Large Language, with a dull, cold temperament, large Secretiveness, Cautiousness, and Veneration, and small Self-esteem and Mirthfulness, are peculiar to a person of few words. Modesty keeps some from talking, while courage stimulates others to talk with the same degree of language.

SOCIAL FEELINGS AND AFFECTIONS.

The influence of the social and domestic feelings is very great, and enters largely into all the affairs of life. They are powerful stimulants to action, and lead to combined and concentrated action. Friends work for each other, willingly and cheaply, and advertise each other with pleasure. All the machinery of the mind is set in motion when one honestly loves another, especially with reference to marriage; for the whole nature is put into a warm glow by a quicker circulation and greater motive for action. The eyes are brightened and lit up with intensity; the step is light and easy; the movements are graceful; the voice is gentle and musical, and the wish or prayer is for all to be happy. Where there is no love, affection, or sympathy, the person is cold and repulsive, and the voice will be harsh, and the movements be angular and awkward. Love and affection, warm sermons or speeches, stimulate the actor, make life put value on life, and make labour practical and definite. Domestic affection localizes life, concentrates and multiplies enjoyments, builds the house and fills it with furniture and conveniences; bears and rears the children, and prepares them for the work of life, and thus fills the earth with the climax of God's creation. When perverted, Amativeness leads to the lowest grades of lewdness and vulgarity, and the other domestic feelings give jealousies, social dissipation, vagrancy, idleness, and living on others, and allowing the family to go to ruin. When small the person takes little or no interest in family life or domestic enjoyments, preferring to live alone and have his own way in everything.

THE SELFISH FEELINGS AND PROPENSITIES.

They are to the mind what the bones and muscles are to the body. They are the force of the mind. They give craving appetites, longing desires, greedy wishes, manœuvring actions.

No great enterprises have been carried through without the forceful power of the selfish feelings. They also give self-protection and preservation; and when guided by the superior qualities of the mind all the great work of life is done. The wild beasts are subdued, the land is cleared and tilled, nations are defended, and the earth is explored; the mines are worked, the machinery is made, and all obstacles are overcome. Many have too much force and selfishness, which carry them beyond bounds of harmony and balance, and they are turbulent, impulsive, and subject to extremes.

When perverted and morbid in action they give gluttony, drunkenness, fighting, cruelty, and murder; slander, defamation, covetousness, theft, double-dealing, and falsehood, suspicion, cowardice, and the disposition to live a low life. Their deficiency results in idleness, inefficiency, prodigality, indiscretion, imprudence, and carelessness.

INTELLECTUAL FACULTIES.

These powers of the mind open all the doors to all the different sciences and conditions of nature, and lead to universal knowledge. By their combined action they set all nature at liberty, loosen all bonds of attraction, convert solids into liquids, and liquids into solids, or gases; divide the properties of air and water, make new combinations, and apply principles in new ways; explain what was considered a mystery, and allow our eyes to see what they never saw before. They unlock and take light into secret and dark places. They make the soil produce food and clothing, and from the bowels of the earth they obtain heat, light, and all kinds of minerals for use and ornament. They invent letters, figures, and machinery, and enable us to augment power of sight and strength, and by their use man measures both the earth and the heavens. By their exercise man becomes very learned in many ways, and has great power, and is as a god upon earth, and is able to subdue and use it to his advantage. They give him the power to see everything, to measure everything, to recognise the form and countenance of everything, to keep his balance when in motion, and understand and take the advantage of force and resistance; to see and understand all colours, and apply them to beautify and ornament in art; to arrange, systematize, and put into proper order all machinery, tools, plans, and various kinds of work; and last, though not least, to calculate, make estimates, and use power and knowledge to the best advantage.

Reason, combined with perception, gives the ability to convert the wilderness and barren wastes into productive fields and beautiful gardens, makes rough places smooth, and brings civilization out of barbarism.

Man's intellect is the eye of the soul, and a guide to all mental operations and forces. It investigates, understands, and makes use of the laws of nature, as well as enables him to analyse his own mind.

The reasoning faculties give power to comprehend first principles, to think, reason, invent, and trace the relation of cause and effect; to combine principles, and bring them to

bear and act harmoniously, and to understand their bearing and importance, as well as to give judgment and soundness of mind. While the perceptive faculties introduce us to physical objects, their qualities, conditions, and uses and laws, as applied to matter, the reasoning faculties take a higher range, and lead men to reason on politics, government, duties, obligations, and general mental development.

Inventive power requires the exercise of several faculties, for many principles in mechanical movements and their adjustment need to be taken into account. Clearness of mind and distinctness of mental action are necessary. Ideality and Spirituality open the mind and render it more impressable.

Causality comprehends the idea, Comparison sees its availability and application. Constructiveness gives dexterity and versatile contrivance. Order gives the arrangement and adjustment of ideas. Calculation gives power to make up the estimates and count the profits and losses. Individuality, Form, Size, and Locality, give definiteness, outline, proportion, fitness of parts, compactness, and facility to apply the principle. Weight and Calculation make estimates as to propelling power, force, and resistance. Eventuality takes cognisance of the action and working of parts. Firmness and Continuity aid in keeping the mind to the subject, and continuing as well as connecting thought, while the process is going on in the mind, for without great perseverance and application it could not be accomplished. Joined to all the above qualifications great patience and discipline of mind are necessary. A knowledge of chemistry, mechanics, and mathematics, is quite necessary for a successful inventor.

IMAGINATION.

It is not known that this power of the mind depends upon any one organ of the brain. It is the quality and condition of the brain that favours and indicates it. Constructiveness, Mirthfulness, Ideality, Sublimity, Spirituality, and Language, are the more direct mediums through which it is manifested. The memory and intellectual faculties generally are powerfully assisted by the imagination, for with it a strong person can make the most of his wits, learning, and various powers of mind.

The aspiring, elevating tendencies of mind come mostly from the coronal or superior portion of the brain, embracing, especially, Hope, Spirituality, and Veneration. These faculties give earnest, longing desires for something superior, above and beyond what we have or enjoy at present, especially in refinement and purity of mind.

Regulating, restraining qualities of the mind, that tend to hold in check and keep the mind from acting prematurely, unwisely, or out of balance, are Causality and Intuition in the intellect; Conscientiousness and Veneration in the moral brain; Conjugality and Continuity in the domestic brain; Cautiousness and Secretiveness in the selfish brain. They all more or less exert a restraining influence.

The attractive, mellowing, sympathising, helping, and self-sacrificing disposition comes from a genial temperament. Inferior, selfish, animal feelings, with large Benevolence, Veneration, Approbativeness, and Friendship, with moderate Self-esteem and Firmness, add Language, Mirthfulness, Imitation, Agreeableness, and Eventuality, and the person will be very successful in entertaining company, and take delight in being agreeable, and doing missionary work.

Natural inclinations to marry arise from Conjugality, Amativeness, Parental love, Inhabitiveness, and Benevolence, especially if the marriage is a true, honest, love marriage, where both are equally pleased and gratified. But it would appear that many marriages are based on selfishness, where the one is benefited at the expense of the other.

Those most inclined to Christianity, or most ready converts to it, or religiously disposed, have large Veneration, Conscientiousness, Hope, Spirituality, and Benevolence, with full Cautiousness and social feeling, and inferior Self-esteem and selfish brain. Those who are the least inclined to religion of any kind, but are sceptical and disbelieving, are living without the influences of Veneration, Spirituality, and Hope, and strongly braced up by Combaticiveness, Self-esteem, and Firmness. Comparison will be larger than Causality, which inclines persons with unbelief to criticise and find fault.

The moral faculties, fully developed and legitimately exercised, give more elevation of mind, purity of life, consistency of conduct, and personal influence for good, than any other class of faculties, especially when acting in harmony with reason.

Conservative tendencies arise from a brain higher in the crown than in the base, with large Order and Veneration, a high position in society, a responsible office, and plenty of wealth and increasing age, and not much originality or great activity.

Radical tendencies arise from a vigorous body, a high degree of arterial blood, great muscular vigour and force of mind, a heavy base to the brain and a love of opposition.

Those most inclined to a military life are they who are high in the crown of the head, having ambition and love of power,

and courage to face a foe, and love of adventure ; must have strong will-power, a good constitution, good thoracic and muscular development, and large Order, Calculation, Form, Size, Locality, a good digestive system, and a vivid imagination.

The most favourable organization to get rich by personal effort, aside from bold speculations or extraordinary inventions, or discoveries of minerals or treasures, will have broad heads, not very high. To get rich will be the all-absorbing idea and effort, with the attachments and sympathies subordinate ; with large Order, Calculation, and Constructiveness. The temperaments and different faculties decide upon the things to be obtained as riches.

Those most inclined to art and literature are those who have a predominance of the mental and motive temperaments ; are full in the temples, with a long, high forehead, and particularly full in the central portion of the forehead, with large Order and Language. The kind of art or literature will depend much upon the combination of the faculties.

Those most inclined to the healing art will have a predominance of the vital temperament, strong social feelings, Benevolence, Approbateness, Cautiousness, the perceptive intellect, with Comparison and Intuition, joined to a fondness for the study of physical science. For a surgeon there should be large Self-esteem, Firmness, Combateness, Order, Locality, and a strong muscular and bony structure.

Those most inclined to missionary work will have lively sympathies, strong social feelings, and an active moral brain, small regard for this world's goods, a self-sacrificing disposition, great industry, perseverance, and a devoted love for the welfare of others, joined to a strong belief in Accountability, Responsibility, and Immortality, as well as in rewards and punishments.

To become thoroughly depraved and demoralized a man needs only to pervert all his selfish feelings, especially his Alimentiveness and Amativeness, keep the moral brain quiet, and live as though there were no God, heaven or hell, or hereafter, and associate with the abandoned.

To live a thoroughly pure, true, virtuous, honest life, it is necessary that there should be an honest, healthy parentage. The child should be nourished by the mother, not by another woman, or brought up upon the bottle. When weaned it should live on milk, bread, and fruit, and when older, eggs, and chicken, and fish might be added, and farther on game. While growing the child should be directed in his play, and

rendered as useful as possible, and be encouraged to take care of himself and take responsibilities; living with some elevated object in view ahead, carefully avoiding all relaxation of principles as applied to life, steering clear of debilitating and careless habits; early learning to sympathise with others, and labour for their good while labouring for himself, and be content with what he can honestly earn in wealth and honours. Taking the best of men and women as examples and patterns of life; living with distinct consciousness of immortality, of spiritual existence, and of accountability, and as indebted to a creating power superior to himself, from whom all wisdom and support come. L. N. F.

RELIGION IN SOCIAL REFORM.

THERE is an element in social reform which no one who is striving for self-mastery and culture can afford to neglect. This is the religious element, using the term in no narrow sense, but as indicating the normal exercise of the higher faculties, and the consciousness of something in the universe better than the individual man, namely, the ideal towards which the individual strives. The existence of this ideal as a living presence in us and above us, suggesting, admonishing, supporting, constitutes the personal evidence of a religious verity, by whatever name it may be called, for which the heart often yearns, and which we accept not by virtue of any command, but by virtue of experience. It is this element that I should like to see more conspicuous and useful in the reformation of the physical life of man and of society. To avoid sectarian controversy, those whose lives are deeply influenced by it are often constrained to withhold the expression of their knowledge and experience of it. I would speak of it here only as one speaks of universal principles or of the laws of nature. There seems to be a life that includes the individual, that begets and nourishes the individual, and to which the feeblest atom in social organism can turn as a child to its parent. I know of no direct proof of this except the proof of experience; and knowing the value of this experience it would be difficult to suppress the testimony in its favour. The formulation and propagation of intellectual creeds seems to interfere with, rather than promote, the evolution of that religious reality which spontaneously grows and asserts its true place at the head of all the faculties. Occupying a position alike above the reason and the passions, it can be subverted by neither. Its normal expres-

sion is that of the "still small voice" of conscience. Whoever first thus described this voice had heard it. It is so still, so small, so loving, that in the rush and whirl of busy life it is seldom heard. To attune the ear to listen to it, to train the body to obey it, is the first duty and highest privilege of the true reformer. The home will be reformed, society and the world will be reformed, in proportion as the individual becomes conscious of and listens to the "still small voice." Like the all-creative energy, its presence is most visible in the least things, and concerning the humblest duties. It gathers from all the varied sources of knowledge with which we may have come in contact the particular truths which we need to apply at each instant of daily life, and, like a guardian angel, hovers near, unheard, unfelt, except when it can render an actual service, and then it whispers its gentle word and is silent; grieved often, but never offended; unheeded as a rule, but never alienated, never quenched, while an atom of moral life remains. It is this element, call it by what name you will, that I should like to see more conspicuous as a religious verity in the kitchen and at the table of the reformer of the physical life of man. No one nowadays recognises a man as religious simply because he accepts and proclaims some form of intellectual belief, while everyone accepts the religion of every-day life. I plead then for a hearing for the voice within us, and yet above us, that whispers to us at the table, in the kitchen, in the silent chamber, and in the midst even of the rushing throng upon the market-place.

EDWIN F. BACON.

WEIGHT OF THE HUMAN BRAIN.

BASTIAN says, in his admirable work upon the brain, that the average cranial capacity of any race can be ascertained only by the examination of a large series of corresponding skulls, assorted according to sex. He emphasizes the importance of sex in such examinations, and affirms that the influence of sex is often greater than that of race.

It has been pointed out by Le Bon that the range of variation in cranial capacity, to be met with among different individuals of the male sex, seems to be great in proportion to the position of the race in the scale of civilization; thus, large and small male skulls among negroes may vary by 204 cubic centimetres; among the ancient Egyptians, by 353; among twelfth-century Parisians, by 472; and among modern Parisians, by 593 cubic centimetres. He holds that the real

test of superiority of one race over another in regard to cranial capacity is not to be ascertained by averages, which are often most deceptive, but rather by observing how many individuals in one hundred, among different races, possess skulls of given volumes. The superior race, according to Le Bon, contains many more voluminous skulls than the inferior race. Out of 100 modern Parisian skulls, there will be about 11 specimens whose capacity ranges from 1,700 to 1,900 cubic centimetres, while among the same number of negro skulls not a single one will be found possessing this cranial capacity.

MODIFYING CONDITIONS.

Age.—Age is an important condition. It was believed by the earlier anatomists, even by Tiedemann and Sir William Hamilton, that the human brain attained its greatest development at about the seventh year. We now know this to be incorrect; though the male does reach five-sixths of its ultimate weight by the end of the seventh year, and the female brain ten-elevenths of its ultimate weight by the same period.

Thurnam, from a careful consideration of previously recorded results, comes to the following conclusions :

“It may in general be admitted that the average weight of the brain undergoes a progressive increase to a period somewhere between the twentieth and fortieth year. According to all the tables before us which refer to the same, the greatest average weight for the male brain is that for the middle decennial period, or from thirty to forty years ; and this, as M. Broca observes, agrees perfectly with what we know of the continued development of intelligence during the whole of this period. For women the full average size of the brain is perhaps attained within the preceding decade of twenty to thirty years ; but the difference between the two sexes in this respect is not great. From forty to fifty years there is a slight diminution in weight, and a greater one between fifty and sixty. After sixty years the rate of decrease is still greater ; the process of decay becomes more and more rapid, and thus in the eighth decade of existence the average weight of the brain is less by more than three ounces (80 to 90 grammes) than it was in the fourth decade. In the aged, on the average, the weight of the brain decreases *pari passu* with the intelligence. There are many exceptions to this general law, and some, particularly of the more cultivated and learned class, preserve to extreme age all the fulness and vigour of their faculties. The brain of such men, as the late Professor Gratiolet observes, remains in a state

of perpetual youth, and loses little or none of the weight which belonged to it in the prime of life."

Sex.—Sex is another important modifying condition. Thurnam says:

"My own observations fully confirm those of preceding writers as to the average weight of the adult male brain being about ten per cent. greater than that of the female. As Professor Welcker expresses it: 'The brain-weight of the male (1,390 grammes) is to that of the female (1,250 grammes)* as 100:90.' Slight variations are observable in the brain-weights of the two sexes, as given by different observers, but it will be seen that the average difference is expressed with much accuracy by these figures."

The difference between the average weight of the male and female brain, according to Welcker's computation, is 4.94 oz. or 140 grammes; but according to Dr. Peacock's observations on the Scotch, 5.3 oz. or 150 grammes.

Thurnam says:—

"Some have supposed with Tiedemann that the less size of the brain of the female is due simply to her less stature. This, however, is not the case; and it was long ago shown by M. Parchappe, though from a too restricted number of weights, that the difference was greater than could be accounted for in this way. I am able to confirm this opinion from calculations founded on the great tables of Dr. Boyd for St. Marylebone. For this purpose I have examined and compared the average stature and brain-weight for men and women at the decennial periods from twenty to sixty. . . . Whilst the brain weight is nearly 10 per cent. less in the female than in the male, the stature is only 8 per cent. less."

Stature.—Parchappe found that, other things being equal, the weight of the brain in both sexes is relatively greater in tall persons than in short ones; the difference between the two being at the rate of 5 per cent. The brain of a tall man being represented by 100, that of a man of short stature will be found to be 95. So we observe that *stature* is another modifying condition. Some writers have expressed the opinion that the difference between the brain of a woman and that of a man may be accounted for on the ground of their difference of stature, and this would seem to be plausible, although the difference in brain-weight between the sexes among us is 10 per cent., while the difference in stature is only about 8 per cent.

Race.—Race is another modifying condition. Putting

* That is above 49 oz. and 44 oz. respectively.

down the average brain-weight of Europeans at 100, the ratio of the Englishman's brain is 97, according to Boyd, 99 according to Peacock ; while the ratio of the Frenchman's brain is 98, that of the German, 98.5, and that of the Scotchman, 102—Scotchmen having the largest brains among the peoples of Europe. On this scale, the negro would not rise above 90. Bastian thinks that the brain of the Hottentot, Bushman, or Australian, is probably of less weight than that of the negro, but in all these comparisons the stature must not be forgotten.

Records of the brain-weights of males belonging to these races are not as yet forthcoming, but from the ascertained weight of three Bushwomen, as well as from what we know of the mental capacity of the races mentioned, it may well be anticipated that their brain-weight would fall distinctly below that of the negro.

“The brain of a Bushwoman examined by Professor Marshall, was computed to be 31.5 oz., while he has calculated that the brain of an average Englishwoman of about the same age and stature would have weighed not less than 40 oz. The brain of another Bushwoman, commonly known as the ‘Hottentot Venus,’ who was examined by Gratiolet, is said to have been a trifle larger, though the exact weight was not ascertained. Lastly—though first in order of time—Dr. Quain recorded the weight of a Bosjes girl, fourteen years of age, and forty inches in height, as 34 oz., or 963 grammes. This, as Dr. Thurnam points out, ‘falls short even of the average weight of the brain of the female English child between two and four years of age, in whom, according to the tables of Dr. Boyd, the brain-weight is 34.97 oz. (991 grammes) and the average stature 31.6 inches.’ Seeing, moreover, as Dr. Boyd’s tables also show, that by the end of the seventh year the brain of the female has attained to at least ten-elevenths of its full weight, the brain of this Bosjes girl is not likely to have been much behind the weight to which it might have attained in the adult condition.”

INFLUENCE OF CIVILIZATION.

The longer a state of civilization has existed among any particular people, the more generally diffused among the individuals of such a people would be a tendency to inherit a brain of full dimensions. How else can we explain the remarkable series of Chinese brain-weights given by Dr. C. Clapham ? In sixteen chance individuals of the coolie class, victims of the great typhoon which raged at Hong-Kong in September, 1874, the brain-weights are distinctly above the

average of the English, French, or German. It would be impossible to point to such another series of figures among any sixteen chance individuals. Dr. Clapham, who gives these facts, says, in commenting upon the remarkable brains of these Chinamen: "Of the capacity of the Chinese coolie class for learning, I am not inclined to speak lightly; I am convinced of their natural aptitude in this direction."

The following table gives the Chinese brains as determined by Dr. Clapham:—

BRAIN-WEIGHTS OF SIXTEEN CHINESE.

<i>Males.</i>			<i>Females.</i>		
No.	Probable Age.	Weight.	No.	Probable Age.	Weight.
I	30	$49\frac{3}{4}$	I	26	$45\frac{1}{2}$
2	28	50	2	38	49
3	45	$53\frac{1}{2}$	3	30	44
4	40	56	4	70	$42\frac{1}{2}$
5	50	$49\frac{3}{4}$	5	18	$46\frac{1}{4}$
6	40	48			
7	25	$46\frac{1}{2}$			
8	48	54			
9	55	$49\frac{1}{2}$			
10	35	$51\frac{3}{4}$			
11	30	$46\frac{1}{4}$			
Average 50.45			Average 45.45		

We have in these facts just what we might expect as the results of a very long-continued civilization, viz., the inheritance of a large brain, together with remarkable capacity for learning.

BRAIN-WEIGHTS OF DISTINGUISHED MEN.

Name.	Age.	Ounces.
1. Cuvier, <i>Naturalist</i>	63	64.5
2. Abercrombie, <i>Physician</i>	64	63
3. Schiller, <i>Poet</i>	46	63
4. Goodsir, <i>Anatomist</i>	53	57.5
5. Spurzheim, <i>Physician</i>	56	55.06
6. James Simpson, <i>Physician</i>	59	54
7. Dirichlet, <i>Mathematician</i>	54	53.6
8. De Morny, <i>Statesman</i>	50	53.6
9. Daniel Webster, <i>Statesman</i>	70	53.5
10. Campbell, <i>Lord Chancellor</i>	80	53.5
11. Chauncey Wright, <i>Physicist</i>	45	53.5
12. Agassiz, <i>Naturalist</i>	66	53.3
13. Chalmers, <i>Celebrated Preacher</i>	67	53
14. Fuchs, <i>Pathologist</i>	52	52.9
15. De Morgan, <i>Mathematician</i>	73	52.75
16. Gauss, <i>Mathematician</i>	78	52.6
17. Dupuytren, <i>Surgeon</i>	58	50.7
18. Grote, <i>Historian</i>	76	49.75
19. Whewell, <i>Philosopher</i>	71	49
20. Hermann, <i>Philologist</i>	51	47.9
21. Hughes Bennett, <i>Physician</i>	63	47
22. Tiedemann, <i>Anatomist</i>	80	44.2
23. Hausmann, <i>Mineralogist</i>	77	43.2

The age is given because, as already stated, age has an important influence. This series of brain-weights is interesting as bearing upon the much discussed question of the connection between size or weight of brain and intelligence.

The last four in the list, it will be observed, fall below the average among the favoured races, viz., 49 ounces; but Tiedemann and Hausmann were old men, having lost, probably, since forty years of age, from two to three ounces each.

As no man having a brain below 37 ounces has ever been other than an idiot, it may safely be claimed that size or weight of brain has very intimate relations with intelligence.

In commenting upon this table of the brain-weights of distinguished men, Bastian says: "If it should be asked whether the proportion of large brains among highly intelligent people is likely to be greater than among non-intelligent people, the answer to this question may be unmistakably in the affirmative—and this, as Le Bon has pointed out in regard to 'cranial capacities,' is the real direction in which we ought to look for evidences of class or racial superiority."

And again he remarks, that "in the above table of brain-weights of distinguished men (which, be it observed, is in no sense a selected list, since it comprises all such weights known to the writer as having been recorded), the proportion of those exceeding 55 oz. amounts to nearly 23 per cent., and might have been much larger still had it not been for the great age of some of the distinguished individuals whose brains were examined. For, notwithstanding a marked amount of senile atrophy in some of these brains, no less than eleven of them still weighed $52\frac{1}{2}$ to 55 oz. It seems quite possible that those of Sir James Simpson, Daniel Webster, Lord Campbell, and Professors De Morgan and Gauss, may each have exceeded 55 oz. in weight when these distinguished men were not only in good health, but were also under sixty years of age. And in this case the number of decidedly large brains among these twenty-three distinguished men would be raised to about 45 per cent. The list is small from which to draw any conclusions, but the difference in proportion indicated seems to be far too great to be attributable to mere chance."

EVERY effort is made in forming matrimonial alliances to reconcile matters relating to fortune, but very little is paid to the congeniality of dispositions or to the accordance of hearts.—*Massillon*.

THE HYDEBOROUGH MYSTERY.

A TALE OF A GREAT CRIME.

BY CAVE NORTH.

CHAPTER XIV.

SUSPECTED.

WHILE Pennyfold Drupe was enjoying his fool's Paradise, the meshes of his rival's net were closing nearer and nearer about him. There was scarcely a trace of suspicion in his nature; and if there had been, he would hardly have seen anything of a character likely to implicate him in the circumstance that a brown leather glove, supposed to have been Mr. Softly's, had been picked up in Hockley Wood. The young chemist was interested in the fact, because he thought it might prove to be the first clue towards the unravelling of a painful mystery.

The morning following the discovery he and Letitia had a sad colloquy on the subject. Then he learned that the glove was undoubtedly an old one of Mr. Softly's. It had been recognised by Mrs. Softly and Mary. Both identified it as one of a pair that had long lain in the drawer of the hat-stand in the hall, and that Mr. Softly had been in the habit of putting on in wet weather, or when he went to look after his plants in the conservatory. It was surmised, of course, that he might have taken the gloves when he went out on the eventful night of his disappearance. This was the theory of the police, who further supposed, from the finding of the glove where it was, that the old gentleman might have been inveigled into the wood, and there murdered. The clue seemed a lame one, but anyway it was a clue.

Pennyfold went home that evening with a strange feeling of depression; it was as though he felt the first tightening of a cord about him. He explained the sensation to himself by the fact that, equally with Letitia, he had hitherto believed that his uncle was still alive, and would yet discover himself or be discovered. The feeling was, if anything, intensified the next morning. Letitia perceived how the matter troubled him, and, deeply affected as she was herself, she forgot somewhat her own concern in her wish to comfort him.

"I can't help being concerned," said Pennyfold. "It seems to me that in the discovery of that glove there is untold trouble for us all."

"But it may, after all, prove to be nothing," returned Letitia.

"I can't see it in that light."

"Well, don't meet the trouble half way, if more trouble there is to be, there's a dear Pennyfold. It seems as if we had had enough for a lifetime."

Letitia had never been so kind and tender to him before; nevertheless the load on his heart would not be lifted.

That night, looking across the valley to Acacia Villa, Pennyfold stretched out his hands towards the glimmering light, which was as the pole-star of his existence, and cried—

“O Letitia ! there is trouble coming for thee and for me. God grant that thou be true to me through it all as I will be to thee !”

The next morning, who should he meet as he was passing out of the gate of Hawthornden on his way to town, but Mr. Rice, the detective—Mr. Rice, who had found the glove in Hockley wood. A shudder ran through the young man’s frame on seeing him ; but then Mr. Rice was the sort of man to make nervous people shudder on meeting him unexpectedly. He was a tall thin man, with a withered left arm, and a terrible squint. To say the best of him, he was a sinister-looking individual.

The detective wished Drupe a “Good-morning,” and passed on. This was neither the first nor the last time that this myrmidon of the law was seen hanging about Scaleby, and Pennyfold wondered more than once what business could call him there. Could it be about his uncle ? His doubts were destined to be very soon resolved.

One afternoon about a week after the discovery of the first glove, a policeman in plain clothes called at the shop in the Cow Market and asked to see Mr. Drupe. Mr. Farrel, the chief constable, had sent his compliments, and would be obliged if Mr. Drupe would step over to the Town Hall, as he wished to see him very particularly.

Mr. Drupe went at once, and, curiously enough, on his way, he never once connected the invitation with his uncle’s disappearance. Imagine, then, his surprise when Mr. Farrel told him that a second brown glove had been found, to all appearance a fellow of the first, and that the said glove had been discovered by Detective Rice in the old disused well of Hawthornden. Was it to be wondered at that the announcement took away his breath, and that for a moment he could not speak ?

There were the gloves, both soiled, but one still wet as it had been rescued from the well ; the other having the appearance of having been trampled in the mud for some considerable time.

Scarcely had he recovered somewhat from this first surprise ere Mr. Farrel staggered him with a second. He produced from a drawer a leathern spectacle case, and asked him if he knew it. Pennyfold recognised it as his uncle’s, and said so. Asked when he saw it last, he said he could not recollect.

“Would you be surprised to learn,” said Mr. Farrel, eyeing him very closely, “that it was found in the side-pocket of an old overcoat of yours, sold the other day with some other things to Mrs. Mouldwarp ?”

Pennyfold was more than surprised ; he was thunderstruck. From the time of quitting his uncle on the eventful night of his disappearance until the present moment he had never once recalled the incident of the spectacles. He began to recount the circumstances,

when the chief constable warned him that anything he said might have to be used against him.

For the first time, the unsuspecting Pennyfold perceived that he was an object of suspicion. A proud flush mounted to his temples, and he exclaimed—

“Am I to understand then that you consider that these circumstances point suspiciously to me as having had something to do with my uncle’s—?”

A lump rose in his throat, and he could not finish the sentence.

Mr. Farrel did not reply directly; but he said there were some unfortunate circumstances about the affair that needed clearing up; they were obliged to follow up every clue; but doubtless anything suspicious would be able to be explained away.

Pennyfold had very little to say. The whole affair came upon him with such suddenness that he was thoroughly confused. He went away feeling that the net was tightening about him, that he was in the grip of some dreadful fatality; but he was incapable of thinking clearly, or judiciously weighing the facts that seemed to be so terribly against him.

At the shop he found Agnes, pale and agitated. She told him what had happened: two detectives had been to the house, and ransacked every room and corner, but without finding anything besides the glove which they picked out of the well. His mother was in a terrible state of anxiety, and implored him to return at once. At the door, Pennyfold hesitated a moment; he would have liked to run up to Cuckoo Hill, and see the one who could comfort him as no other could; but Agnes, noting his hesitation, begged him with an imploring look not to delay.

They went by the road, the rains having rendered the field-path impracticable. They spoke but little until they came to the stile leading to the path through Hockley Wood. Seeing Pennyfold approach the stile, a look of concern appeared on Agnes’s face.

“Don’t let us go that way,” she said.

“Why not?” asked Pennyfold, with a smile.

“I don’t know; I would rather go round the other way.”

The “other way” was to continue along the high-road for another quarter of a mile, and then take a bye-road to the village—a good half-mile further. But Agnes, a *protégée* of Mrs. Drupe’s since she was left an orphan at the age of thirteen, was so accustomed to exhibit needless anxieties and useless fears in those gentle grey eyes of hers, that Pennyfold had, in his robust, manly way, got into the habit of laughing her solitudes out of court.

“Come,” said he, “why should you wish to give yourself an extra half-mile to walk? What is there to fear?”

Whereupon he helped his mother’s youthful companion over the stile, and then taking her arm within his, endeavoured to re-assure her drooping spirits as they walked through the darkening wood.

Hockley Wood is not many acres in extent, but in parts it displays all the romantic beauty of a much more extensive demesne. When

they reached the Scaleby edge of the wood, a load seemed to be lifted off Agnes's mind, and she said to her companion—

“Have you an enemy, Pennyfold?”

The latter replied that so far as he knew he had not, and asked why she put the question.

“I only wanted to know,” was Agnes's response.

The young man thought no more about the question; he almost forgot his companion's presence, so deeply were his thoughts engaged in the contemplation of another lady, the lights of whose home he could just begin to see glimmering through the distant trees. By long association the girl tripping by his side—for she was not much more—had come to be looked upon as one of the everyday essentials of life, like light and air, and the other thousand-and-one things that we take as matters of course, and only pray for when missed.

When they had gone some distance further, and had reached the outskirts of the village, Agnes again asked, but this time with more hesitation, and without looking at her companion—

“Are you sure you have no rival, Pennyfold?”

The young man was startled by the question, and answered quickly, “What a question to ask!” at the same time casting an inquiring glance into his companion's face. It was pale and placid, as usual, but there was a look in her large eyes that told him that his secret was an open one to her; seeing which he added—

“Not that I know of, Agnes. Why?”

“Because,” replied Agnes, very quietly, looking him full in the eye, “don't you think someone may be trying to make trouble for you?”

“Who could make trouble for me?” queried Pennyfold, addressing his own mind rather than Agnes.

Agnes only shook her head in reply. Nothing more was said between them, for they had now reached the gate of Hawthornden; but all the rest of the evening that question was repeating itself to him: “Don't you think someone may be trying to make trouble for you?”

CHAPTER XV.

THE RADICAL CANDIDATE.

Pennyfold now began to feel the position in which he was placed very acutely. His interview with the chief constable got into the evening papers, and the circumstances that led to it were exaggerated a thousandfold. That great unreasoning baby, the public, at once jumped to the conclusion that Pennyfold was the wretched slayer of his uncle, and wondered why he was not held under lock and key. The young man not only saw all this, but he perceived that many of his friends and acquaintances suddenly became very shy of him. But the coldness he could have endured, and thought comparatively little of, had it not been that Letitia, too, seemed to be influenced by the prevailing suspicion.

The morning after he had been sent for by Mr. Farrel, he called to see her. She was then full of sympathy, bade him be of good courage, and opined that these untoward things were sent merely to try them. Pennyfold went away with courage high enough to meet a thousand such troubles; but when he had reached the shop in the Cow Market, and had seen at least a dozen acquaintances pass him with averted faces, he felt that the mercury of his courage had descended at least fifty degrees, and for the remainder of the day no woman's kiss and kindling eyes could have raised it again. Ah, if one's courage could, through all our troubles and trials, be screwed up to the sticking-point!

The next time our friend called at Acacia Villa he could not see Letitia; she was engaged—weeping, though he was not told so. Mrs. Softly, who was now getting about a little more, received him coldly. It was at her command that Letitia refused to see her cousin. His haggard look and sad eyes touched no chord of sympathy within his aunt's bosom; her own loss filled her mind so much that she had no thought for others' troubles. Mrs. Softly's soul had never gone out beyond her own narrow life; and now she suffered one of Nature's inevitable revenges; no sympathy could comfort her, and no sympathy with another's sorrows could soften or make her forget her own.

The next day Pennyfold was almost turned from the door. Angry and troubled, he wrote a letter to Letitia, reproaching her for refusing to see him in his trouble, and sent it off in all haste by hand, but repented when too late that he had done so. In reply, he received a very cousinly epistle, suggesting that for the present they would do well not to see each other—their friends thought so, and signing herself, "Your affectionate cousin." "No longer 'your loving Letty!'" sighed Pennyfold. Altogether the note was so formal that he was cut to the quick. He groaned in spirit; then a lightning flash of indignation sent a thrill of fire through his brain, and he wrote in return—

"So quickly?—at the first breath of scandal? Ah, Letty!"

When he had sealed up this brief epistle for post, he longed to break the seal, and add some few pleading words, but he resisted the inclination, sending up to the Ever-pitiful a wail for pity instead, even telling God how beautiful and how good she was, in extenuation of his almost despairing cry. Poor Pennyfold! it was the first touch of real pain he had felt, and it made him whine like a stricken whelp.

While young Drupe was being sunk deeper and deeper in gloom and despair, Hydeborough was enjoying the maddening excitement of the election. It did not wait for the late member's bones to be laid in the grave before the struggle was commenced. Jacob Softly was adopted as the Conservative candidate, and the walls of the town soon broke out with a rash of blue bills, whereon, in Jacob's name, the party promised that the Constitution should be upheld in all its integrity, and the old faith be safeguarded against all foes.

Jacob was so pleased at the sight of his name placarded everywhere, that he did nothing else for the first day or two but walk about and admire it. He thought that surely to be so billed was to be immortal, and as he read over his principles, he felt convinced that the "Constitution," so endorsed, could not help being honoured and strengthened.

But it was very hard work to preserve his immortality, for Mr. Spratt's able bill-stickers were equally busy, and hardly had Jacob's blue plaster had time to dry on a hoarding, ere one of Mr. Spratt's yellow ones was clapt on top of it. It was a fierce contest—one that the bill-stickers and printers enjoyed immensely.

At first the Radicals were behindhand. They had decided upon no candidate, and therefore for a day or two the walls were about equally divided between Whig and Tory: Fangast was indefatigable, however, in putting it to the Radicals that they must be speedy if they intended to do anything; he was likewise unwearied in offering suggestions. Would this man do? would that man do? They did not want a rich man; they did not need a learned one. What they did require was a man who would not betray them. As for himself, he was for selecting one of themselves. Their pence could subsidise him if needful. Every man's labour was worthy of its reward; and so on and so forth.

Fangast worked like a horse. He prepared speeches, and had one ready every time he was called upon—speeches long, speeches short, speeches racy, speeches serious, speeches sarcastic and argumentative, speeches hot and denunciatory—he had them on his tongue ready for any emergency; he had them, moreover, in his pocket ready to hand privily to the greedy reporter. Hence he was better reported even than Spratt, who could talk commonplace by the day: he was said even to rest his jaws by talking.

But, despite all his labour, Jerome Fangast was afraid he was going to lose his chance. Jacob had had his emissaries at work; and at various meetings, when the question of a Radical candidate was mooted, the name of Jerome Fangast was shouted out by some one in the background; but no one took it up. Fangast wondered at the stupidity of his chosen associates; he could not understand them; he was free enough with his money, and he thundered enough against the nomination of a man of position who, he said, when once elected, would look down upon them and betray them, rather than be renegade to his own class.

But—to put the matter briefly—Job Caudwell came to the rescue. One night after a stormy meeting Fangast and Job met. Said the latter—

"You are too modest."

"Too modest! Why?"

"Because you are for ever beating about the bush instead of coming directly to the point."

"How do you mean?"

"Tut, man! You think I don't know. You want to be the Radical candidate, and you can't say it right out!"

"I can't propose myself."

"Why not?"

"No, that would be too thick. But if you could do something like what you did before now—"

In short, Job managed it by the cunning of his pen, and two days later Fangast saw himself acclaimed Radical candidate. Hydeborough was astonished at itself; while as to Jerome he wondered that so small a place had given birth to so great a man. Verily, it seemed to him as though gods walked the earth again as in the olden time. He swelled visibly, and imagined, in his exaltation, that it were a small thing to pluck down the Morning Star—or the Evening.

Jerome's address to his constituents was a magniloquent affair. It was written in the first flush and heat of his greatness, and in due course was multiplied by the printer, and hung about promiscuously by the bill-sticker—the flaming red sheet meeting the eye everywhere, and obscuring everything else. No place was spared; every hoarding and every square yard of vacant wall were filled with it, even to the end of the Carr-lane Chapel; so that Job Caudwell was justified in saying that the town blushed to the very temples at his audacity.

Jacob Softly managed to get hold of one of the first copies of the bill, and hastened with it to Acacia Villa. Arrived there, he summoned Letitia into his presence, and unfolding the flaming abomination, and flaunting it before her astonished eyes, said—

"Look, Letty, at the husband I have chosen for you!"

"I can see a name, father, and many words, but no husband," replied Letitia.

"That name and those words represent the Radical cause," cried Jacob in his stagiest manner; "and no woman could have a better husband."

"But I don't want to have a cause for a husband," responded Letitia, ruefully; "indeed, I do not want a husband at all—at least, not yet."

"You don't know what you want. What woman does? But I want you to be the wife of the Member for Hydeborough—and that you shall be."

"I shall be satisfied with the honour of being the daughter of the Member for Hydeborough, and that I shall be," replied the young lady with a smile and a courtesy.

"No, no; that will not be. We want no Tory Member for Hydeborough, and none there will be."

"But I thought, father, you were for Conservative principles?"

"I am for that which brings me the most honour and the least trouble—that, as the raven said, that and nothing more."

"Then you do not want to win?"

"Not I. I only consented to be put up to take some votes from Spratt, and give Jerome a chance. What should I want to be Member for? The fools! they thought they were hoodwinking me, and we have hoodwinked the lot of them."

Later on in the evening the Radical candidate himself paid Acacia Villa a secret visit. It was only a brief one, as both he and Jacob had to attend meetings of their respective parties.

Fangast received the congratulations that Jacob showered upon him with much dignity. Letitia thought he looked larger than he had ever done before; he certainly filled the eye more. Her awe of him was increasing.

When he had suitably replied to Jacob's felicitations, he turned, rather formally, to his daughter, and said—

“May I not hope for your congratulations, too, Miss Softly?”

But when his gaze met hers, it was unsteady, and quickly travelled away.

Letitia gave him her congratulations, and found herself wondering after he was gone whether she could fancy herself loving him as a husband.

CHAPTER XVI.

THE RIOT.

In due course election-day came, and nothing was thought of in all Hydeborough but the contest that was that day to be decided. It was high holiday for the school children, and they, plentifully sprinkled with the dust of politics, amused themselves by exchanging arguments in the shape of sticks and stones in the bye-streets; while their elders contended less picturesquely over their cups and the ballot-box. As the day waxed and the beer-barrels waned the political heat rose higher and higher. After mid-day no work was done, and the streets became more and more crowded, and more and more noisy. Still, with the exception of a few free fights, and the overturning of a cab or two carrying rival voters, there were no acts of violence.

But shortly before the closing of the poll, a change came over the spirit of the scene. A strange rumour got noised abroad—a rumour of treachery, of conspiracy. At first it was very vague, fashioned differently by a hundred different tongues. But by-and-by it became more consistent. It was to the effect that Jacob Softly had played the traitor to his party; that he had conspired with Jerome Fangast to dish the Tories and give victory to the Radicals, and that during the closing hours of the poll, he had been seen to bribe voters to poll for his ostensible opponent.

The simple fact was that Letitia's maid, who had overheard Jacob's confession to his daughter, had been indiscreet in having blabbed the secret to Maria Goosey, who of course communicated it to John Henry Gander. Gander at first resolved to keep the secret to himself, and not let the indiscretion go farther; and, as a matter of fact, he did actually keep it for one day—and probably no secret was ever kept inviolable longer; but being an ardent politician, and a warm supporter of Mr. Spratt, and chancing, moreover, to meet Dr. Gribble shortly before noon on the morning of the eventful day,

he confided to that gentleman the momentous secret which had at last burnt the bottom out of his discretion. Now, Dr. Gribble, though a professional man and a learned, was one of the veriest old women in Hydeborough. He had one or two professional visits to make, but after a little hesitation he decided to postpone them and hasten to the Liberal committee-room. That was the way the secret came out.

Of course the news was not tardy in travelling to the ears of the Tory committee, where it caused not a little indignation. Some of the gentlemen said contemptuously that they might have expected something of the kind when they took up with such gentry as Jacob Softly, a man of yesterday whom nobody knew, a beggar until his brother made him a present of a few houses as a kind of token of respectability. Those, however, who had had a hand in bringing Jacob forward, did not take the matter so coolly—some raged, some swore, and some vowed vengeance. Among the latter was Bob Toster.

After the closing of the poll, that worthy found himself in his accustomed place at the "Lord Rodney," his political associates about him. The fearful treachery was discussed, argued about, magnified, denounced, pictured in its beginning, forecast in its result, looked at historically, treated from a moral point of view, dealt with politically, treated lightly by this speaker, belaboured by that, and indeed generally palavered about according to the genius of this latter half of the nineteenth century. The decision—if decision they may be said to have arrived at—was that Jacob Softly was a good-for-nothing, not to say a scoundrel, and that they were all "jolly good fellows!"

Meanwhile, the feeling of the meeting, together with its prevalent inebriety—for the organ of deliberation had been well qualified with liquor—overflowed into the court-yard, and thence into the street, where it became noisier and more furious in proportion as its recipients were less reasonable and responsible. When the clamour was at its height, Toster suddenly left the chair in which he had presided over the deliberations and potations of the chosen "Rodneyites" for more than two hours, and passing along the room without saying a word, appeared on a gallery overlooking the seething court-yard, where the sight of his huge form and broad fuliginous face, commanded instant silence.

"Men," he said, unsteadily, "fellow-burgesses, you have heard of this treachery (cries of "Yes!"). Well, what I am going to ask you to do is this: when you have heard the poll declared, which will be in about an hour's time, if it be declared against us, do not think of wreaking vengeance upon our villainous betrayer (cries of "Won't we, though!")—but go home quietly (a voice: "Yes, we won't hurt him, but go home and tell his mother!")—I implore you, as quiet citizens, not to think of punishing our despicable betrayer (cries of "No, No!" and "Let that be!")—I ask you not to lift a hand against him, but to go home ("singing, 'We won't go home till

morning!"")—Nay, go home, or I fear there will be mischief ("Likely enough!" and "Three cheers for Toster!" which were given, followed by the chorus, "We won't go home till morning," etc., by the younger spirits)—Jacob Softly will not wait—"

Toster essayed to complete his sentence, but his voice was drowned in the deepening chorus, and in the cries of, "To the Town Hall!"

An hour later, there was a sea of heads in front of the Town Hall. The crowd had been steadily increasing for a couple of hours, till now every accessible foot of space held its human being. As the near clock of St. Anne's struck nine, a hush came over the vast assemblage, and every eye was turned towards the portico of the large building in which the business of the Corporation was transacted. A number of ladies and town dignitaries had gained admittance there, and had been, for an hour past, most unmercifully "chaffed" by the crowd outside. Presently, the wide doors were thrown open, and the Mayor, preceded by the Town-crier with his bell, and followed by two of the candidates, their chief supporters, town-councillors, etc., came forth amid the shouts of the populace. The Mayor held a piece of paper in his hand, and stepping to the balustrade, he read something from it very nervously. None but those immediately at his back could hear a word, so great was the noise. There was a shout for him to speak up, whereupon his worship handed the paper to the Town-crier, who, after drowning the uproar with his bell, thundered out the result of the poll; from which it appeared that Mr. Spratt topped the poll by a narrow majority, Fangast standing next, a long way in front of Softly.

For a moment, there was a sudden hush; then followed a mingled shout of elation and defiance. The defiance came from the throats of Toster's lambs.

From the Town Hall they rushed to the Market-place, and there howled in front of the Opposition committee-room and the Opposition newspaper office for half-an-hour. Then a bolder or a crazier spirit hurled a stone, which went crashing into the window of the hotel in which the Liberal Committee was held. That was all the signal that was wanted. Stone quickly followed stone, and crash followed crash, while the spirits of the rioters mounted as the glass fell. Detachments broke off from the main body, and dispersed in the neighbouring streets; and cries, shouts, and the crashing of glass accompanied them wherever they went.

Presently, however, there was a cry of "Police!" and a stampede quickly followed. The police found the square empty; they pursued the retreating rioters down several bye-streets, and succeeded in arresting two or three boys.

Since the throwing of the first stone only a few minutes had elapsed; yet during that brief space of time nearly all the glass in the Market-place, and a great deal in the streets adjoining, had been broken.

The police rested on their laurels, and congratulated themselves that they had quelled the riot. But presently word came that the

rioters were on their way to Cuckoo Hill. Mr. Farrel gave orders for twenty men to double down Meadow Road, and outflank them. The movement succeeded; the rioters having stopped to sack a public-house on the way, found the ends of Eastgate and of Durham Street—the only outlets that way to Cuckoo Hill—held by the police, and incontinently fled.

The police having no orders but to bar the entrance into Cuckoo Road, refrained from following them; whereupon the more determined of the rioters, having tasted blood in the shape of the liquor from broached beer-barrels, resolved to outwit the myrmidons of the law, and led the rabble by devious ways to the common on the north side of the town, taking care to break an occasional window on the way, to keep their hands in and their spirits up.

Those whose mind and courage had been exhausted by the sight of the blue-cloth barrier, and their subsequent run, drifted again towards the Market-place, where they had the pleasure of taking part in an edifying spectacle—namely, the reading of the Riot Act, and of hooting the Chief Magistrate while he did it; afterwards slinking off to bed, or into dark corners to watch the chances of the night. Meanwhile the rioters, still on the war-path, had gained the Common, whence, under cover of the darkness, they succeeded in reaching, unmolested, Cuckoo Road, beyond the hill. Here there was no sign of resistance; they had completely outwitted and outflanked the police, and the cry now was, “To Softly’s!”

The rioters numbered from two to three hundred, and as they went along, with shout and song, they broke and put out the lamps the better to make their escape when needful.

When Jacob heard the surging and howling of the crowd outside the gates of Acacia Villa, he only too well guessed what the matter was. Fangast had sent him word that rioting had broken out, and that he might be singled out for the vengeance of the mob; having done which he deemed it prudent to keep well under the wings of the police.

The worthy Conservative candidate had been drinking all day, and he had increased his potations since his return home. He was consequently in a high state of pot-valiancy. The women-folk were already in bed, it being nearly eleven o’clock. The coast being clear, therefore, Jacob assembled the men-servants in the library, armed them with the fire-irons, ordered Radley to bring in a supply of whisky, and then addressed them as a general might his army—or rather as a stage-general might a stage-army:—

“Britons! Countrymen! Hear me, and be—hiccough—silent that you may hear (another drink). The enemy is at our gate—hiccough—but you are brave men, and will stand—hiccough—stand by me to the last. I have confidence in you—in every one of you, begad!—hiccough. With these arms we will defend hearth and home—hiccough—and they shall sooner walk over these bodies—”

Crash! A volley of stones came against the window; several dropped in the room, having found their way through the Venetian.

blinds. In an instant, Jacob was under the table, and his army—Radley, Thomas the footman, and Evans the gardener—precipitately fled, leaving their arms behind them.

After the first volley there was a lull. Jacob thought the rioters had fled, rescue probably being at hand. He left the shadow of the table, and was straightening himself out, when another crash, followed by a second and a third, made him rush for the door. There he stood for a moment uncertain, perspiring ; then, seeing a door open that led to the cellars, he went for it as a rabbit goes for its hole, head-foremost ; and the worthy Jacob saw no more of that night's business.

Fangast, whose house was in Eastgate, near the Town Hall, waited for some time expecting a visit from the mob ; then, finding everything quiet, he ventured out. The streets thereabout appeared tranquil, no rioters about ; the police assured him there would be no more disturbance that night, the mob having dispersed after the reading of the Riot Act.

Thus reassured, Fangast walked as far as the Radical committee-room. There were a few persons there discussing the day's defect and the night's disorder. Fangast joined them, and drank a glass of grog ; but he was not easy, and presently excused himself, and withdrew.

It chimed quarter past eleven by St. Anne's as he left the hotel ; he walked slowly, meditatively, chewing the cud of his thoughts and the end of a cigar at the same time. When he reached the end of Eastgate, he suddenly became aware of an uproar in front of him. It seemed to come from Cuckoo Crescent in which Acacia Villa was situate. Yes, and there undoubtedly mischief was abrew, for behold a lurid glare through the trees !

With an energetic exclamation, Jerome Fangast sped back along Eastgate, and gave the alarm to the first policeman he met ; then he ran back as fast as he could. In order to save time he leapt a low fence, and made across some market-gardens that bordered the road ; but it proved a case of most haste least speed ; for he first stumbled into some cucumber frames and grievously cut his hands, and then tumbled headlong into a water-tank, and out of that into a heap of liquid manure. He was in a pretty pickle by the time he got to the end of the gardens, and could not refrain from muttering, "And this is the would-be member for Hydeborough !"

The delay thus occasioned enabled the police to arrive almost as quickly as himself. Nor did they come to the rescue a moment too soon ; for when Fangast reached the gate of Acacia Villa he saw the whole house was in a blaze, while shrill screams rent the air. Flames were issuing from the lower windows, and from the second-floor windows, at the east end, threatening the tower.

As Jerome entered the grounds at one side of the house, a force of police rushed in at the other. Instantly, at the cry of "Police !" there was a rush and a scramble ; a few were knocked over by the police, and one constable was floored by a broad-shouldered fellow whom he tried to arrest.

Meanwhile, a number of neighbours had hastened to the spot, and everything else was forgotten in the anxiety to save the inmates, or such of them as were still alive. The butler and the gardener were in evidence; but it was feared that all the rest were still in the house.

While some were endeavouring to effect an entrance at the back, Fangast perceived a couple of figures at one of the windows in the tower. They were Letitia and her maid. Fangast called out and signed to them to remain quiet, and ran with the gardener to the back of the house for a ladder. They soon returned with one, and assisted by a number of willing hands succeeded in rearing it against the windows.

As the auctioneer set his foot upon the ladder to mount, another figure appeared hastily upon the scene: it was that of Pennyfold Drupe.

CHAPTER XVII.

THROUGH WATER AND FIRE.

Pennyfold had gone home early in the afternoon. There was no business doing, and in apprehension of disturbances the tradesmen in the principal streets were closing their shops; Marshall & Drupe, therefore, followed their example, and put up their shutters. Mr. Marshall then donned his best coat, and went to do his duty at the ballot-box, intending afterwards to extract what pleasure he could from the enforced holiday. Pennyfold, it may well be imagined, had little appetite for either voting or pleasure-seeking. For the first time in his life the holiday appearance of the town was distasteful to him. Although a diligent student, he was no recluse, but a lover of life in all its phases. In the street, in the market, in the workshop, everywhere, he loved to see and study men at work and at play; and where the movement was the most active, and the life the most intense, there he liked most to be.

But to-day everything was awry: he found pleasure in nothing. Oh, how terribly out of tune he must be to find all this life and bustle grate upon his sense! But so it did, and out of town, therefore, he hurried as fast as he could.

When he had passed the bridge, and got beyond the last house, he felt freer, if not happier. He breathed the fresher air, cast his eyes over the expanding landscape, and, apostrophising earth and air, exclaimed: "Oh, if I could live with you alone, then could I be happy!" And for half a minute the poor young man really thought it. But then, his eye happening to fall upon the little tower of Acacia Villa, over there amongst the trees of Cuckoo Hill, he added pathetically, "With you and my Letitia!" But then came the reflection that "my Letitia" was no longer his Letitia, but rather his "Tristitia"—his false fair one. Oh, how could woman be at once so fair and false! So he soliloquised—so complained.

Pennyfold was sinking deeper and deeper into melancholy.

Avoiding the path across Hockley Wood, he went round by the road. At the junction of the road leading to the village of Scaleby, with the high road, Pennyfold heard the voice of a man singing in the wood. He stopped and listened, and then distinctly heard the sound of a spade under the voice of the singer.

"I wonder what he can be about?" thought the young man, and walked on. He had occasion to recall the song and the singer long afterwards.

Over his tea, with his mother and Agnes, Pennyfold became more cheerful. In his rosier frame of mind he thought Letitia might come round again after the suspicion attaching to him had had time to die away. Perhaps she was right, and he was wrong to think wrongly of her. In a happier mood than he had experienced for some days, he mounted to his laboratory, where he was soon immersed in his chemical experiments. He became so deeply interested that he took no note of the time until overcome by weariness. Then, before retiring to rest, he stepped to the window in order to take a look over the valley to where his love-star shone. There was the light sure enough; but was Letitia thinking of him? And if so, was she thinking of him kindly, or as a possible malefactor?

Pennyfold ensconced himself in the window-seat to think the matter out, but without making much headway. It was all a wandering round in a circle, and the continual repetition of the questions: "Does she love me? Does she not love me?"

He had sat thus for some time, his eyes all the time fixed upon the light from Letitia's window, when suddenly a great tongue of flame seemed to leap out of the lower part of the house, then another and another. Could he be mistaken? he asked himself. Could it be anything but a house on fire?—her house?

A horrible thought flashed across the young man's mind, and without giving another moment for consideration, he slipped quietly downstairs, seized his hat, and let himself out. The next minute saw him leap the garden wall, and go bounding like a roe across the meadow.

In his impetuosity he did not think of the waters being out, and was only recalled to a sense of the fact by plunging ankle deep into them. There was no time to retreat now; in front of him there was a great glare against the sky; possibly his beloved was in danger; he must on. He pressed forward, but with difficulty, the water reaching to his waist before he reached the foot-bridge. On the other side it was not so deep, but there was a greater stretch of it. However, he finally won through; but then, handicapped with his dripping clothes, he found progression slow and toilsome.

The nearer he approached, the more certain he became that Acacia Villa was on fire. At length he reached the house, to see the two white figures already mentioned at the little tower window that he knew so well, and Jerome Fangast at the foot of the ladder which had been placed against it. He took in the situation at a glance. Dashing through the hall door, which the butler, aided by some neighbours and the police, had burst in, and making his way through

the blinding smoke, he gained the foot of the staircase. It was still whole, though in flames. Pulling down the rim of his hat to protect his eyes, he ascended to the first floor, and thence made his way, not without extreme danger on account of the blinding smoke and the flames, to the room where he knew Letitia and her maid were. With a kick of his foot he burst open the door, which was already on fire, and entered. The room was empty, but the window was open, and on the ladder Fangast was descending with Letitia in his arms. Mary was standing at the foot of it. Oh, how he envied his rival the burthen he bore!

When Pennyfold appeared at the window, a dozen voices bade him descend quickly ere it was too late. The flames were almost up to the window, and the room in which he stood was already beginning to burn. He was just about to get through the window, when Letitia, catching sight of him, cried out: "O Pennyfold! my aunt—my aunt!"

Pennyfold knew his aunt's room, and without stopping a moment to consider, he again rushed through the choking smoke on to the landing, descended the stairs, which were almost one mass of flames, to the next floor, and was about to make for Mrs. Softly's room, when he stumbled over something, which proved to be that lady herself. He picked her up—she seemed but a feather's weight—and again succeeded, albeit badly burnt, in making his way to the window where the ladder was. Choked with smoke, and ready to faint with the heat, his strength failed him when he would have got through the window; but fortunately ready hands had come to the rescue, and in a very brief space he and his aunt were landed in safety. But Pennyfold was so badly burned that he had to be conveyed to the hospital.

Every one now had been rescued except Jacob, and in his case the worst was feared. Nothing had been seen or heard of him since his "army" left him under the table in the library.

However, with his usual luck, Jacob escaped with little more than a smoking. The fire-engines arrived just as Pennyfold effected the rescue of Mrs. Softly, and in a very short space of time the flames were subdued, although not before the lower part of the house had been completely gutted and a portion of the roof had fallen in.

Venturing among the still smouldering ruins, the firemen, guided by Radley and Evans the gardener, made their way into the cellar, and there found the redoubtable Jacob seated with his back against the wall, and the empty whisky decanter in his hand, asleep.

All anxiety on his account being now at an end, everybody laughed to see the pickle he was in, for he was nearly black with the smoke and soot. Jacob enjoyed the joke as much as any one; and when Letitia, for the first time, flew into his arms and kissed his smutty cheek, he remarked—

"You said, Letty, you would prefer to see me play Othello; behold the Moor!"

"No more of that, if you please," said Letitia.

(To be continued.)

Facts and Gossip.

THE number of competitors for the prize essay on phrenology, by youths under eighteen years of age who have sent in essays is so small, that it has been decided to keep open the competition until the 25th of May. For particulars see the January and February numbers of the MAGAZINE. For the prize essay on the Utility of Phrenology, open to all, quite a number of competitors have sent in essays. The winner will be announced in our next issue.

A RECENT issue of the *Pall Mall Gazette* contained the almost incredible record made by a school-girl: A girl named Akerman, aged fourteen, daughter of a labourer, has just completed her education at Langley School, Bucks. She has never missed being present since the school was opened, October 4, 1875, and in completing her 3,451 attendances is said to have walked 6,000 miles. She has passed every standard successfully, and in the three subjects on first-grade drawing obtained "excellent" prizes in free-hand and model, as also in the three stages of the specific subjects, literature, domestic economy, and animal physiology, and in one stage in physical geography. She has also obtained twenty-six other prizes for good attendance, sculpture, sewing, knitting, &c.

ALL the children in school in Prussia, numbering 4,000,000, on a certain day were examined, and the colour of their eyes and hair carefully registered. It was found that 42.97 per cent. had blue eyes and 24.31 per cent. brown; while no less than 72 per cent. had blonde hair, 26 per cent. brown, and only 1.21 per cent. black hair. Only 6.53 per cent., again, are of brunette complexion. In Bavaria the light-haired proportion is much smaller, and the *savans*, therefore, consider that the dark complexion comes from the South, which is in accordance with the general belief. In Southern Asia any colour but black for the hair may be said to be absolutely unknown, and light-coloured eyes, though not unknown, are extremely rare.

IN France some years ago a conveyance of land required twelve adult witnesses, who were accompanied by twelve little boys; and when the price of the land was paid and its surrender took place the ears of the boys were pulled and they were severely beaten, so that the pain thus inflicted should leave an impression upon their memory, and, if required afterward, they might bear witness to the sale. Later, when a criminal was being executed, parents whipped their children, so that they might take warning by the example, and keep in the path of virtue.

Answers to Correspondents.

[Persons sending photographs for remarks on their character under this heading must observe the following conditions :—Each photograph must be accompanied by a stamped and directed envelope, for the return of the photographs ; the photograph, or photographs (for, where possible, two should be sent, one giving a front, the other a side view), must be good and recent ; and, lastly, each application must be accompanied by a remittance (in stamps) of 3s. 6d., for six months' subscription to the MAGAZINE.—ED. P. M.]

A CORRESPONDENT writes:—"On several occasions I have troubled you with photos to obtain your interesting reports as to the characteristics of the originals ; and it is right that I should acknowledge the truthfulness of your delineations, many of them so remarkable that in some instances I was suspected of giving private hints respecting them, until I gave assurance to the contrary."

C. M. (Bow).—You are a pretty able man, full of resources, and with uncommon "staying" power. You appear to have a fairly good condition of body for health and strength, and only need to take ordinary care of yourself to enjoy life and to live to a good old age. But there is so much "go" in you that you may at times be tempted to overdo. Your phrenology shows but few positive weaknesses. Intellectually, memory of details is the weakest faculty you have. Your memory of events, incidents, &c., is not good. You remember the principles involved in history, and the causes of events, rather than the concatenation of events themselves. You should be noted for your common sense, for your general understanding, and for your power to reason from causes to effects, and *vice versa*. Are very critical and quickly see differences and distinctions ; should be noted for your sharp and, at times, rather rasping witticisms ; are fond of fun, but when you begin to joke someone is liable to feel it. You are full of energy, and cannot very well be idle ; are not wanting in temper either ; and when you have made up your mind to do a thing you generally do it ; are very determined, and sometimes almost too resolute. You can't bear to be opposed, and you have not the least patience with lazy or stupid people ; are very domestic, and would not live a lonely, unsociable life for anything. You need to put a check on your executive powers, and to guard your temper, and be a little more patient, and perhaps a little more tolerant of the foibles of others. You have a fair amount of imagination, but have not so much power to express yourself *viva voce* as in writing. Your moral brain is well represented, and you should be known as being a high-minded, conscientious, and religious man.

G. P. (Chester).—You possess the elements that go to make a thoughtful student and philosophical reasoner ; and with the advan-

tages of a good education you could succeed in some intellectual or professional pursuit. You are short of force, pluck, and energy to push your ideas forward and make the most of your talents; hence you must cultivate more executiveness, more confidence in yourself, and more language to express your thoughts in a ready and copious manner. Your moral brain appears to be fully represented. Your sympathies are strong, and influence your life and character. You have very little peace of mind when you feel you are doing no good work; you delight to be of benefit to others. Veneration is another strong feature of your moral brain; it inclines you to feel great respect for your inferiors, and also makes you diffident and sensitive when placed among them. You are at times too easily imposed upon by others, and think every man is as honest as you are, until by your own experience you are led to think otherwise.

G. P. (Chester).—The mind of this lady is exceedingly susceptible; she feels external influences very keenly, and harbours much of her trouble, and many of her disappointments within, rather than allow an outlet to her mind. She is cautious and reserved, and is not readily understood by her friends. She needs to come out of her inner-self more, by associating with others more than she does. Her photograph impresses us with the idea that she has had considerable responsibility thrown upon her; hence has learned to keep her own concerns to herself, and be her own adviser. She appears to have a well-balanced mind, and is capable of forming good judgments about matters and things. She is orderly and neat, and regular in the execution of her duty. She is almost morbidly conscientious and fearful lest she may have left undone any obligation or promise. She worries herself unnecessarily over her sins and shortcomings. She would like to alter much that she sees that is inconsistent in society. Her mind has to work under a cloud oftentimes, because she cannot attain her ideal, and people do not reach her standard of principle.

W. R. W.—The young man represented by this photograph is an offshoot of a vigorous stock. He is well-born, and if he grows up to carry out his present promise, he will develop into a man of uncommon powers. He is blessed with a good physique, and should enjoy the best of health with the minimum of infantile ailments. Phrenologically, he shows no special lack in any direction. The moral brain appears to be exceedingly well developed, and it will be an easy matter to bring him under the influence of religious principles. He will be kind and good-natured. He is not a cross child, nor liable to manifest a destructive temper. The selfish faculties are not large, and if he grows up as he is at present in this respect, he will be an uncommonly generous man. Later, possibly, it may be necessary to encourage a little more energy. Intellectually there seems to be a fair promise that he will become a thoughtful, imaginative, critical man, with a remarkable memory for all that he sees and hears.

THE
Phrenological Magazine.

JUNE, 1885.

CARL ROSA.



HIS is pre-eminently the head of an artiste. It is high, long, and narrow. The central organs are the largest, and give a distinct and individual type to the character. Observation, memory, critical acumen, quick insight, together with sympathy, aspiration



[BY PERMISSION FROM THE "*Magazine of Music*."]

towards the higher art, perseverance, and a fixity of purpose that allows of no swerving, are the leading characteristics of a nature whose key-note, so to speak, is concentrated force. Few men are so quick and intense as the subject of the sketch. He goes to his object instantaneously and in a bee-

line. He is not a man of strong imagination, and is not deceived by fancies and preoccupations, but takes very definite and precise views of things. He should be known for his powers of close calculation, for his order and method, and for his taste and ingenuity. He is not a great talker, and as a rule prefers to listen rather than to do the talking. He is a man of few words; but those few are to the point, and no one can say they misunderstand him when he gives directions or indicates a wish. Sometimes, perhaps, he is too taciturn, and does not manifest as much ease and suavity of manner as he might.

It is not often we find a man of such unconquerable will and energy. Nothing stops him; little discourages him; and if stupid people place obstacles in his way, or obstruct, they are likely to feel the weight of an anger that burns its way through an opposing element like gunpowder. But he is not a vindictive man, nor perhaps specially forgiving.

He is a good organiser, a good financier, not a spendthrift, and yet a man of many generous impulses. Very punctual in his engagements, strict in matters of obligation, proud, perhaps a little haughty; sensitive to praise and blame, ambitious, frank, and sociable, with a strong leaning to the domestic circle. Few men are better qualified to make and keep friends, and to win their way by force of those sterling qualities that cause a man, when once known, to be always trusted in.

His musical gifts are great, Tune and Time being both large; but he will always show to better advantage as a leader and director than as a performer.

He is a good type of a man with a sound physical constitution—one that with careful husbanding, avoiding excesses either of work or indulgence, will last into old age. But it is one that, under excess of labour or stimulants, is liable to give way suddenly, like the snapping of a violin string.

E. P. M.

The season of English Opera which commenced the second week in April at Drury Lane Theatre, under the joint management of Mr. Augustus Harris and Carl Rosa, marks an era in the history of opera in more senses than one. We have been told, and the truth has been brought home to us in more ways than one of late, that the day of Italian Opera is passed. Italian Opera has not paid for years in London, whatever it may have done elsewhere. Last year's enterprise in that line was so disastrous that it was stated, and generally believed, that it was the last season of purely Italian Opera

that we should see for a long time. Such a thing could not have been a few years ago. Italian Opera to wait on English Opera! the thing was unheard of. But such is the case. Opera in the vernacular has beaten opera in a foreign tongue all along the line.

That such is the case we owe largely to Carl Rosa. Balfe long ago gave it as his opinion that the permanency of national opera meant the encouragement of native artistes. Mr. Rosa, with remarkable insight, perceived the truth of this view, and with equal pluck and pertinacity he went to work to realise the dream of a national opera. Strange, however, it is that it should have been left to a foreigner to promote the interests of the English lyric stage. But it is, nevertheless, true; for, as everybody knows, Carl August Nicolas Rosa entered the world at Hamburg on the 22nd of March, 1843. As a mere infant he gave evidence of unmistakeable musical talent; he played the fiddle at the precocious age of eight; it is, indeed, on record that he performed in public during the first decade of his existence. His progress, naturally enough, suggested a course of instruction at the Leipsic Conservatoire, which he entered in his sixteenth year.

We next trace his appearance in Paris, where he gained a prize at the Conservatoire; then he is found as conductor of the Philharmonic Concerts of chamber music in his native city; and makes his *débüt* at the Crystal Palace, Sydenham, on the 10th of March, 1866. And this is what Chorley said concerning the young artiste's first appearance here: "Herr Rosa's violin playing is adroit, technically well finished, and showing propriety rather than depth of feeling; but he has no faults to unlearn, and has the modesty of style which bespeaks the real artiste." Shortly afterwards Mr. Rosa crossed the Atlantic to join as solo violinist a company organised by the late Mr. Bateman. Mdme. Parepa was the *prima donna* of the troupe, and to her Mr. Rosa was married in February, 1867. Both artistes warmly championed the cause of opera in the English tongue, and the success which accompanied their American campaign showed that the musical public fully acknowledged the significance of the undertaking.

Returning to England, the couple tried their fortunes in the provinces, and eventually Drury Lane Theatre was secured, where preparations, under the direction of Mr. Harry Jackson, were being made for the production of an English version of *Lohengrin*. Mdme. Parepa was to have played Elsa, but the untimely death of this amiable and gifted

artiste, which took place on the 21st of January, 1874, necessitated the abandonment of the enterprise.

Great as was his loss, Mr. Rosa held to his purpose of inviting the verdict of London audiences on his scheme at the earliest practicable moment. Hence he opened a seven weeks' season at the Princess's Theatre on September 11 of the following year, and with a company of highly capable vocalists.

A provincial tour followed, and in the autumn of 1876 the troupe opened an eight weeks' season at the Lyceum Theatre. At the Wellington Street house the result surpassed the gratifying success achieved at the Princess's. Wagner's *Flying Dutchman* was produced on a grand scale, and secured its first genuine recognition in this country.

The year 1877 was mainly devoted to country tours; and at the Adelphi Theatre the London season of 1878 commenced on February 11, and lasted seven weeks. On the occasion of his fourth season, Mr. Rosa migrated to Her Majesty's Theatre, on January 27, 1879, where his novelties comprised Wagner's *Rienzi*, Guiraud's *Piccolino*, and Bizet's *Carmen*. On January 10 of the following year he again opened at the Haymarket house, giving Thomas's *Mignon*, Verdi's *Aida*, and Wagner's *Lohengrin*, each for the first time in English.

We are bound to admire the pluck and spirit with which Mr. Rosa placed before his patrons the Wagnerian examples just named. Those and *Tannhauser* (14th February 1882) were staged on a scale of singular completeness, and at a cost of something like twelve thousand pounds. The best available talent was retained, the companies having included Mdme. Minnie Hauck and Herr Schott, an eminent actor with a big, but at times rather uncertain, voice. Mr. Rosa secured Her Majesty's Theatre for a third time in 1882. *Lohengrin* was produced on the opening night, 14th January, and the season's novelty took the shape of Mr. Barrett's adaptation of Balfe's *Moro; or, The Painter of Antwerp*. Drury Lane Theatre welcomed the two novelties from the pens of native musicians alluded to in the prospectus for season 1883 (*Esmeralda* and *Colomba*); and last April Dr. Villiers Stanford's opera, *The Canterbury Pilgrims*, sought the favour of audiences which have ever been ready to cheer and encourage well-directed enterprise. There is little need at this hour of day to show what Mr. Rosa has done on behalf of Balfe's theory referred to above. Single-handed he has fought a gallant fight on behalf of the native composer, and thereby he has given a noteworthy impetus to art. "The hour came,"

says the *Magazine of Music* (to which we are mainly indebted for the materials for this notice), "and with it the men; proving that home material, if properly encouraged, can hold its own with any foreign supply." Mackenzie, the Scotchman, Villiers Stanford, the Irishman, and Goring Thomas, the Englishman, were not approached in vain, and who knows the number of dark horses Mr. Rosa may yet bring to the winning-post? German connoisseurs awakened one morning to find that there was, after all, a good deal in the British musician. And so, after sundry eyes had been duly rubbed, *Colomba*, for example, successfully appealed to the Teuton in one of his favourite temples of the lyric drama. Dr. Villiers Stanford enjoys growing Continental fame, but it may be doubted whether his contribution to the Carl Rosa *repertoire* is not, as yet, over the heads of the average opera-goer in this country.

Altogether the interests of English Opera are singularly bright and promising, and there is reason to anticipate that at no distant date a permanent metropolitan house will be found for the further encouragement of native art. Mr. Rosa's present London Season will comprise a period of nine weeks, the chief novelties of which have already been stamped with public approval. One of them, *Nadeshda*, by Goring Thomas, was written expressly for Mr. Rosa. The other productions that were looked forward to with especial interest are Manet's *Manon* and Boito's *Mefistofèle*. It is worthy of note, in conclusion, that Mr. Rosa is the only impresario in the world who carries on grand opera without subvention or help from seat-holders, municipal grant, or assistance of any kind.

NORMAL STANDARD OF PHYSIOLOGY.

BY NATHAN ALLEN, M.D.

IT is admitted that Professor Huxley is the highest living authority on matters pertaining to physiology. The following table, prepared by Professor Huxley, defines the constituent elements that compose a perfect human body. It describes exactly not only all its principal parts, but what supplies it must have, from day to day, to preserve it in a healthy state.

This table reads as follows: "A full-grown man should weigh 154 pounds, made up thus: muscles and their appurtenances, 68 pounds; skeleton, 24 pounds; skin, $10\frac{1}{2}$ pounds; fat, 28 pounds; brain, 3 pounds; thoracic viscera, $3\frac{1}{2}$ pounds; abdominal viscera, 11 pounds; blood which would drain the

body, 7 pounds. This man ought to consume per diem lean beef-steak, 5,000 grains; bread, 6,000 grains; milk, 7,000 grains; potatoes, 3,000 grains; butter, 600 grains; and water, 22,900 grains. His heart should beat 75 times a minute, and he should breathe 15 times a minute. In twenty-four hours he would vitiate 1,750 cubic feet of pure air to the extent of 1 per cent.; a man, therefore, of the weight mentioned ought to have 800 cubic feet of well ventilated space. He would throw off by the skin, 18 ounces of water, 300 grains of solid matter, and 400 grains of carbonic acid every twenty-four hours, and his total loss during the twenty-four hours would be 6 pounds of water, and a little above 2 pounds of other matter."

This description represents a harmony or balance of human organization which, we believe, has practically very important bearings. We have in this description set forth, to a certain extent, both the anatomy and the physiology of the body—the structure in the fore part, and the function in the latter part. This organization may very properly be considered the *normal standard* of the human system—that it is represented here in its best estate. While we may not, perhaps, find perfect examples—like the organization here described—we find all manner of approximations towards it. Still the standard remains the same, and upon it are based, we believe, certain great physiological laws which are fundamental and vastly important. Some of these laws we propose to notice briefly in this article, but it would require volumes to do justice to them.

I. *The Law of Health*.—In analysing this table we might almost scientifically figure out the exact changes which cause disease. There must be in the very nature of things one kind or type of organization more conducive to health than another. Admitting this fact, there must be an organization of the body far better adapted to secure perfect health than all others. What then must be its type or character? What must be its anatomy and its construction? Is not that the standard which consists in a perfect development of all the organs of the human body, so that there shall be a perfect harmony in the performance of their respective functions? By referring to the table, it will be seen at once that a change in the weight or measures pertaining to any part of the body, will make a radical change in the type or standard set before us. If you change any one of these factors, you destroy the harmony or balance in the whole organism. If the structure is changed, it impairs just so much its functions. This constitutes the entering wedge of disease. The particular kind or

character of the disease must depend upon what organ or part of the body is changed. By referring to the table we find certain directions given as to the support of the body. If there is a failure to carry out these directions, or if there is any material change in the character of the supplies, disease may not at once be produced, but the vital forces of the system may be lowered, or some weaknesses started. The first changes may be slight in their character, but lead to serious results. Some of the gravest diseases originate from the most trivial causes.

There are, it may be said, different *degrees* of health; this fact is very obvious. What makes the difference? It is not because this or that organ alone is sounder in one person than in another. It is not simply because one person takes so much better care of himself than another, though this makes quite a difference. If we bring together all the causes or reasons, we shall find that the secret consists in the fact that the constitution of one is more perfectly and evenly developed—that there is greater harmony and completeness in the performance of the functions of all parts of the body. There must, therefore, be a *general law* regulating this whole matter of health—some standard, some type of organization better than all others. As far as figures can explain it, we find it described in the table at the head of this article. In other words, it consists in that type or standard where every organ in the human body is perfect in structure, and where each performs perfectly its own legitimate functions. In some respects the body may be compared to a complicated machine, so thoroughly and perfectly made that the “wear and tear” will come equally upon every part according to the design in its construction.

Closely connected with, and legitimately following this condition of things, we find nature has established another law, viz. :

II. *The Law of Longevity*.—Is there not some standard or model laid down by physiology itself that shows why, in certain cases, life should be protracted to a great age? It does not depend upon food, climate, locality, race, or care, though all these may have much to do with it. Is there not an *internal factor* more potent than all these? One of the great secrets, we believe, not only of good health but of long life, consists in the harmony or balance of organization. This must apply both to structure and function. The leading vital organs should be not only sound, but well-balanced. The principal forces in carrying on the functions of life may be summed up under these heads: respiration, digestion,

circulation, assimilation, and secretion. Each of these departments must be well sustained in order to secure long life.

But, aside from any theory or opinion or argument, what are the actual facts—what do we find in the organization of those persons who have reached a very great age? No tables or statistics can be given from post-mortem examinations of such cases, because attention has not been turned in this direction. But, from the physical description of a great number of very aged persons, and from careful observation also, of a very large number, we have always found that a most striking harmony or balance of the physical system prevailed. In great longevity there is uniformly found remarkable consistency or evenness in the mental, moral, and social elements of character. These traits originate from a sound and well-developed brain. This organ plays a very important part in securing longevity.

There is another argument in favour of this law of longevity—that the extremes in physical or mental development seldom reach a very great age. It should be borne in mind that the law of longevity here advocated constitutes the golden mean, or balance-wheel, between these extremes. For instance, the defective classes, such as the insane, the idiotic, the deaf-and-dumb, the blind, &c., are not, as a body, long-lived. Neither are dwarfs, nor giants, nor persons approximating such organizations, very long-lived.

There is another very important factor in longevity—that is, *inheritance*. Scarcely any truth on this subject is more firmly established than that the ancestry, the family or stock, has much to do with long life. Seldom, if ever, do we find a person reaching a great age without some one or more persons in the ancestry have reached a great age. What, then, is the peculiarity or type of organization here perpetuated? What are its elements that make life so long? Do we not find that they consist in a sound, healthy structure of every part of the body, and that there is a remarkable balance in all the organs, and a harmony of functions? So universally is this essential element found in persons long-lived, that we question whether a single exception to the rule can be found. This leads to another application of this normal standard of physiology—that upon it is based the

III. *Law of Heredity*.—For centuries there has been more or less interest on this particular topic. A large mass of facts have been gathered upon the subject, and physiologists now generally admit that there must be truth in this matter of inheritance. Within a few years the interest has greatly increased. In the case of domestic animals the principle has

been reduced almost to a science. With some changes or modifications the same principle which has been so successfully applied to the animal creation will apply to human beings. But before there can be great advances on the subject we must understand heredity better—we must have some general law or principle to guide us. What we need more than anything else is a general principle or law by means of which all the facts or knowledge of this kind can be classified and reduced to some system. It is impossible to make any great advances or improvement upon the subject of heredity without such a guiding principle or standard of appeal. In the facts or phenomena of nature there must be some general law or principle to guide us in understanding them and improving upon them. All science makes progress only in this way.

While there may be different factors, and secondary causes in producing many of these hereditary phenomena, if the primary cause or starting point could be ferretted out we might find it to extend back several generations. All the general principles of science, when traced back to their origin, are based upon nature in its best condition. And the nearer we can go back to a perfect physical organization the less peculiarity, eccentricity, or defect shall we find. It may be we cannot explain or understand all the causes of the strange or different phenomena of character; it does not disprove but there may exist a general law somewhere. It is true there have been different theories and speculations in accounting for hereditary influences, but we do not believe that they can all be explained so satisfactorily upon any other law or hypothesis as upon the one here stated—that is, upon a perfect development of anatomy and physiology, or in other words, that all the organs in the human body shall be so constructed that there must be legitimately a healthy performance of all their functions.

There is another important test in favour of this normal type of physiology—as far as the human body is concerned it presents the true *standard of beauty*. Man was created with a sense of taste and love for the beautiful, which, cultivated and perfected, might find objects in nature capable of gratifying this taste to its fullest extent. Now there must be a type or model for man which in form, proportion, size, fullness, outline, is more beautiful than all others. Is not this the same standard that Grecian and Roman artists have attempted to imitate in statuary? Has it not, in all ages, and with all nations, attracted attention? Why should it not constitute the basis or foundation for most valuable laws?

But the most important law of all, involved in this physiological description, remains to be stated, that is,

IV. *The Law of Human Increase*.—This law virtually controls all the others. With a change here, the conditions of health, of longevity, and of heredity would necessarily be more or less affected. It is, in fact, the starting-point, the ground-work of the most important inquiries that can be raised connected with physiology. All that we can here do is to state what the law is, what some of the evidences in support of it are, and what are some of its applications. It would require volumes to do justice to the whole subject.

In the first place, there is no universal law of population that is generally admitted as such, and referred to as authority. Nearly one hundred years ago Malthus established what he supposed a general principle to regulate population, and his theory prevailed for fifty years or more. It is discarded now by nearly all physiologists, as well as most writers on political economy. It is rare to find now any prominent writer advocating the doctrines of Malthus. The theories of Herbert Spencer on this subject have probably at the present day more influence than those of any other writer. The views of Spencer, unlike those of Malthus, are based upon physical organization, but are not so strictly physiological as the law here proposed. The foundation, the ground-work of the law we advocate, is based solely upon anatomy and physiology in their best estate. There are other factors, such as food, climate, exercise, and other external agents, but these are secondary.

That this law may be distinctly understood we will describe, as briefly as possible, what is meant by it. It is based upon a normal or perfect physical standard of the human system, where every organ of the body is complete in structure and performs fully all its natural functions. This principle implies that the body is symmetrical, well-developed in all its parts, so that each organ acts in harmony with all the others. According to this principle, the nearer the organism approaches that standard, and the laws of propagation are strictly observed, the greater will be the number of children, and the better will be their organization for securing the great objects of life.

On the other hand, if the organization is carried to an extreme development in either direction, viz., a predominance of nerve tissue, or of a low animal nature, the tendency in such families or races is gradually to decrease and ultimately to become extinct. Thus, people enjoying the very highest civilization, or living in the lowest savage state, do not mul-

tiply rapidly. It is well known that the families in Europe belonging to the nobility or aristocracy, whose nerve tissue has become predominant by inter-marriage from generation to generation, do not increase much, and not unfrequently these families become extinct. A similar result has also followed the inter-marriage of relatives, from the fact that the same weaknesses or predispositions to disease are intensified by this alliance. On the other hand, in case these relatives have healthy, well-balanced organizations—it may be they are cousins—they will abound with healthy offspring, and the stock may improve, and not deteriorate from the mere fact of relationship. It explains a principle that has long been employed in the improvement of domestic stock, under the terms, “breeding in-and-in,” and “cross-breeding.”

Again, one of the strangest things has been taking place in the birth-rate of our New England people that can be found in history. It has diminished more than one-half within two or three generations, while that of the Irish, the English, and the German, living right among us, is twice as large as the American. Why this change and this difference? Making allowance for the “arts of prevention and destruction,” which doubtless exist to some extent, we do not see how this great decrease of birth-rate can be accounted for, except by some radical change or difference in physical organization. In connection with this decrease of birth-rate we find this very significant fact—that probably not half of our New England women can properly nurse their offspring at the present day. It was not so formerly, and the Irish, English, and German women find no such difficulty. Has there not been a great increase of nerve tissue among our women, and at the same time, a loss of lymphatic and muscular? Some may think this change of small account, but if the very existence of a people is imperilled—at least in three or four generations—it is certainly a question of some consequence. We close with one suggestion. Man was created a free moral agent, responsible for his acts. The law of propagation is certainly very important to man in his relations to this world and the future. Must man always remain ignorant of such a law, or pass through life a mere passive agent in its administration, without definite knowledge on the subject, or intelligent motives set before him for his action? It is impossible that a wise and just Creator should ever have had such a purpose or design.

DIET IN RELATION TO AGE AND ACTIVITY.

The *Nineteenth Century* contains an interesting article on the above subject by Sir Henry Thompson. In his introductory remarks Sir Henry says:—

“I have for some years past been compelled by facts which are constantly coming before me to accept the conclusion that more mischief in the form of actual disease, of impaired vigour, and of shortened life, accrues to civilized man, so far as I have observed in our own country and throughout Western and Central Europe, from erroneous habits in eating than from the habitual use of alcoholic drink, considerable as I know the evil of that to be. I am not sure that a similar comparison might not be made between the respective influence of those agencies in regard of moral evil also.”

He has no sympathy with any dietary system which excludes the present generally recognised sources and varieties of food, and can see no reason for dispensing with any of them.

“To an inhabitant of the Arctic Circle, for example, a vegetarian diet would be impracticable, because the elements of it cannot be produced in that region; and were it possible to supply him with them, life could not be supported thereby. Animal food in large quantity is necessary to sustain existence in the low temperature to which he is exposed. But I desire to oppose any scheme for circumscribing the food resources of the world, and any form of a statute of limitations to our diet, not merely because it can be proved inapplicable, as in the case of the Esquimaux under certain local and circumscribed conditions, but because I hold that the principle of limiting mankind to the use of any one class of foods among many is in itself an erroneous one. Thus, for example, while sympathising to a large extent myself with the practice of what is called ‘vegetarianism’ in diet, and knowing how valuable the exclusive, or almost exclusive, use of the products of the vegetable kingdom may be for a considerable number of the adult population of our own and of other countries in temperate zones, and for most of that which inhabits the torrid zone, I object strongly to a dogmatic assertion that such limitation of their food is desirable for any class or body of persons whatever.”

Having discussed the powers of the young and robust in dealing with food, and pointed out how with them it is a

matter of indifference for a time whether the quantity of material which their food supplies to the body is greater than their ordinary daily expenditure demands, because their energy and activity furnish unstinted opportunities of eliminating the surplus at all times, Sir Henry approaches the period when close attention to diet becomes especially necessary.

“As we increase in age—when we have spent, say, our first half-century—less energy and activity remain and less expenditure can be made; less power to eliminate is possible at fifty than at thirty, still less at sixty and upwards. Less nutriment, therefore, must be taken in proportion as age advances, or rather as activity diminishes, or the individual will suffer. If he continues to consume the same abundant breakfasts, substantial lunches, and heavy dinners, which at the summit of his power he could dispose of almost with impunity, he will in time certainly either accumulate fat or become acquainted with gout or rheumatism, or show signs of unhealthy deposit of some kind in some part of the body, processes which must inevitably empoison, undermine, or shorten his remaining term of life. He must reduce his ‘intake,’ because a smaller expenditure is an enforced condition of existence. . . . Even our drink must now be nutritious! Most persons might naturally be aware that the primary object of drink is to satisfy thirst, which means a craving for the supply of water to the tissues—the only fluid they demand and utilise when the sensation in question is felt. Water is a solvent of solids, and is more powerful to this end when employed free from admixture with any other solid material. It may be flavoured, as in tea and otherwise, without impairing its solvent power, but when mixed with any concrete matter, as in chocolate, thick cocoa, or even with milk, its capacity for dissolving—the very quality for which it was demanded—is in great part lost. So plentiful is nutriment in solid food, that the very last place where we should seek that quality is the drink which accompanies the ordinary meal.”

Another agent in the combination to maintain for the man of advancing age his career of flesh-eater is the dentist.

“Nothing is more common at this period of life than to hear complaints of indigestion experienced, so it is affirmed, because mastication is imperfectly performed for want of teeth. The dentist deftly repairs the defective implements, and the important function of chewing the food can be henceforth performed with comfort. But, without any intention

to justify a doctrine of final causes, I would point out the significant fact that the disappearance of the masticating powers is mostly coincident with the period of life when that species of food which most requires their action—namely, solid animal fibre—is little, if at all, required by the individual. It is during the latter third of his career that the softer and lighter foods, such as well-cooked cereals, some light mixed animal and vegetable soups, and also fish, for which teeth are barely necessary, are particularly valuable and appropriate. And the man with imperfect teeth who conforms to nature's demand for a mild, non-stimulating dietary in advanced years will mostly be blessed with a better digestion and sounder health than the man who, thanks to his artificial machinery, can eat and does eat as much flesh in quantity and variety as he did in the days of his youth."

There is, Sir Henry remarks, a very common term, familiar by daily use, which conveys unmistakeably to everyone painful impressions regarding those who manifest the discomforts indicated by it—namely, the term indigestion.

"The 'martyr to indigestion' may perhaps be surprised to learn that nine out of ten persons so affected are probably not the subjects of any complaint whatever, and that the stomach at any rate is by no means necessarily faulty in its action—in short, that what is popularly termed 'indigestion' is rarely a disease in any sense of the word, but merely the natural result of errors in diet. For most men it is the penalty of conformity to the eating habits of the majority; and a want of disposition or of enterprise to undertake a trial of simpler foods than those around them consume, probably determines the continuance of their unhappy troubles. In many instances it must be confessed that the complaint, if so it must be called, results from error, not in the quality of the food taken, but in the quantity. Eating is an agreeable process for most people, and under the influence of very small temptation, or through undue variety furnishing a source of provocation to the palate, a considerable proportion of nutritious material above what is required by the system is apt to be swallowed."

It is an erroneous idea that a simple form of dietary, such as the vegetable kingdom in the largest sense of the term furnishes, in conjunction with a moderate proportion of the most easily digested forms of animal food, may not be appetising and agreeable to the palate:—

"And it is an experience almost universally avowed, that

the desire for food is keener, that the satisfaction in gratifying appetite is greater and more enjoyable on the part of the general light feeder than with the almost exclusively flesh-feeder. For this designation is applicable to almost all those who compose the middle-class population of this country. They consume little bread and few vegetables; all the savoury dishes are of flesh, with decoctions of flesh alone for soup. The sweets are compounds of suet, lard, butter, eggs, and milk, with very small quantities of flour, rice, arrowroot, &c., which comprise all the vegetable constituents besides some fruit and sugar. Three-fourths at least of the nutrient matters consumed are from the animal kingdom. A reversal of the proportions named—that is, a fourth only from the latter source with three-fourths of vegetable produce—would furnish greater variety for the table, tend to maintain a cleaner palate, increased zest for food, a lighter and more active brain, and a better state of health for most people not engaged on the most laborious employments of active life. While even for the last-named, with due choice of material, ample sustenance in the proportions named may be supplied. For some inactive, sedentary, and aged persons the small proportion of animal food indicated might be advantageously diminished.”

THOUGHTS ON TEMPERAMENT.

ALTHOUGH, in the following essay, the author very earnestly endeavoured to express himself with entire perspicuity and definiteness, he has reason to know that his views, as there expounded, have not been by every one correctly understood. On the contrary, so erroneous has been the construction which they have received from several individuals of high standing in science and letters (with some of whom he has conversed, and learnt the opinions of the others through authentic channels), that, in justice to his subject, as well as to his readers and himself, he deems it essential to prefix to the present edition of his essay, a preliminary disquisition to prevent it, if practicable, from being again misinterpreted.

Owing to some form of faultiness in his style, or of inattentiveness in readers, or perhaps to an unfortunate confederacy of both, the author has been supposed to rest his theory of temperament *exclusively* on the predominance in size and power (single or united) of those great ruling organs of the body—the brain, spinal marrow, and nerves, the viscera of

the thorax, and the viscera of the abdomen. This, however, is a mistake, as will presently, he trusts, satisfactorily appear.

Instead of being unnecessarily restricted in his exposition of the subject, the author, when his sentiments shall have been correctly apprehended, will be found to have constructed his theory of temperament out of materials derived from a two-fold source—the size and power of the organs just specified, and the relative amount of certain proximate elements which enter as well into the composition of those organs as into that of every other part of the system. And though he attributes to the former of these sources the highest degree of influence in the formation of temperament, he regards the latter (and has so expressed himself) as no inconsiderable auxiliary in the work. By the brief analysis of the matter, on which he will enter without further preface, he hopes to render his views so clear and definite, as to prevent them from being again mistaken or held doubtful.

The human system is composed of a number of organic tissues, serving in the capacity of proximate elements of larger and more compound organs; and these elementary parts differ from each other, not only in substance, structure, and function, but also in vitality, activity, and power. In the composition of the bodies of different individuals those tissues exist in different proportions. And according as one or more of them predominate in quantity, are the constitution and character of the person of whose body they make component parts. To illustrate this statement by a few specifications, containing, in a special manner, a succinct account of some of the elementary tissues to which allusion has been made.

Of these the osseous, cartilaginous, and fibrous, are comparatively of an inferior order. Possessing as they do but a very limited degree of life, they contribute but little to either the production or the modification of character. They serve as mere machinery, to be operated on and thrown into action by other parts superior in material, organization, and endowment, and therefore correspondingly in power and standing.

Of the cellular, serous, and mucous tissues, the same is true, though in a more limited degree. So it is of every other structure whose life and functions are little else than vegetative. Though indispensable as elements in the composition of the body, and therefore essential to health and well-being, those tissues are feeble in their bearing on the formation of character.

The tissues which act the most important part in forming and modifying the constitution and character, are the muscular, the sanguiferous, and the nervous—the last including

the brain and spinal marrow. The muscles most influential in their connection with temperament, are the heart, and those which subserve immediately respiration and digestion. Of these, the chief respiratory muscles are the intercostals and the diaphragm; and the digestive are those that enter into the structure of the alimentary canal. In the production and modification of temperament, the lungs are also, as will appear hereafter, though somewhat indirectly, yet very peculiarly important in their agency. They are deeply concerned in *making* the blood, and exclusively so in *endowing it with life*. And, in the course of its circulation, that fluid again, especially the arterial portion of it, imparts life and vigour, and efficiency to every solid belonging to the body. Hence an organ, if deprived of it by ligatures on its arteries, or by their obstruction in any other way, immediately perishes; and hence the sudden and inevitable fatality of a profuse loss of blood.

From these considerations it is obvious that the agency of the sanguiferous tissue in the original formation of temperament, and in the changes which it subsequently undergoes, is important and striking. I say, "the changes which it undergoes"; for in no individual, at any period of life, is temperament *positively stationary*. From infancy to old age, its changes, though usually gradual and slow, are notwithstanding incessant.

Of all the organic structures that enter into the composition of the body, the nervous is pre-eminently the master tissue—of the highest order, I mean, in vitality, power, and function. In the entire range and bearing, therefore, of its influence on temperament, it is paramount to either of the others singly, if not to the whole of them united. Without it man, though in all other respects the same as at present, would be inferior in standing to the insect or the worm—so true is it that we are only what our *organization* makes us.

Next to the nervous, in its influence on temperament, is the sanguiferous tissue. Even the nervous itself is essentially dependent on it for all it possesses of power and efficiency, and even of life; for, as already intimated, without a sufficient supply of arterial blood, every organ of the body—the brain not excepted—would fail not only in action and vigour, but in *vital existence*.

Conformably to these views of the subject, which are believed to be themselves in strict conformity with truth and nature, it is easy to account for the formation and being of the nervous and sanguineous temperaments. They are simple

in their composition, and therefore in their constitution and character easily understood. As their names import, they arise severally from the respective predominance of the nervous and the sanguiferous tissues, and possess, of course, endowments corresponding to the nature and attributes of those two elements of animal organism.

But there exist two other temperaments, accounted also original and simple, the constitution of which is but little understood—perhaps I should say, not understood at all. They are the *bilious* or *choleric*, and the *phlegmatic* or *pituitary*; the former distinguished by the attributes of active energy, vigour, and endurance under excitement, exertion, and toil, which it imparts to its possessors; the latter by a condition in no small degree the reverse of this—a condition unaccompanied by any elevated and efficient qualities, corporeal or mental.

Were the question proposed, “What are the natural elements or organic constituents of these two temperaments?” to render an answer intelligible and satisfactory would be a difficult task. As far as my knowledge of the matter extends, such an answer is yet to be framed.

The human organism contains no tissues which, either singly or united, or mixed in any known or supposable proportions, are alone calculated to give rise to two such temperaments or states of constitution. A preponderance or deficiency of neither nerves nor blood-vessels, nor of both combined, can produce them. Nor can they be the product of a preponderant or deficient amount of muscle, bone, or tendon, nor of cellular, mucous, or serous membrane.

The question, then, respecting the composition of the choleric and the phlegmatic temperaments remains unanswered, and presents itself as a suitable subject for farther and stricter observation and inquiry. And every sound physiological fact and principle direct that the scrutiny be confined exclusively to the solids of the body; for, as already alleged (the blood alone excepted) none of the fluids has any agency in the formation of temperament. Of what is called the nervous fluid we have no knowledge: and to contend that bile, or phlegm, or mucus acts to such an effect, is to trifle with the subject, or to manifest in relation to it a degree of ignorance which had better be concealed. Those fluids are but the *functional products* of the solids, and can do no more toward the creation of temperament than the gastric or the pancreatic liquor, or than the tear that trickles from the eye, or the matter of perspiration which exhales from the skin.

To shed on the subject of the choleric and the phlegmatic

temperaments the light that is essential to a competent knowledge of them, minute anatomy has not yet attained to the requisite perfection. It has not yet sufficiently developed everything that is involved in what may be called *radical* or *molecular* organization; nor has it disclosed to us the differences that may and probably do exist in the compactness and solidity of the globules composing the primitive fibres of our bodies. Of course, the differences that prevail in the tension, firmness, strength, elasticity, and general condition of the fibres themselves, are equally unrevealed by it.

In the midst of this unfortunate want of facts, we must either resort for information to analogy, or confess our ignorance, and remain silent on the subject. Though the latter alternative is *certainly* the *least hazardous*, and perhaps, also, the most consistent with a spirit of wholesome and rigid philosophy, I shall notwithstanding, on the present occasion, make choice of the former. To the attention of the reader, therefore, the following analogical remarks are submitted.

The effects of dryness and tension on a drum-head, the strings of a violin, the wires of a harp, and on other elastic and sonorous bodies, are known to every one. So are the effects of a condition in such bodies the contrary of this—I mean of a humid and lax condition. In the *former* case, the bodies are full of elasticity, activity, and of what may be figuratively called vigour, and are therefore prepared for the emission of sound, and the production, under suitable regulations, of “spirit-stirring” music. But not so in the *latter*; they are there inactive and unsonorous, lifeless and uninteresting; they possess no sort of efficiency beyond that of common dead matter. Such is the doctrine; and its analogical applicability to the subject I am considering must now be attempted—with what degree of success or plausibility, it is the province of the reader to judge for himself.

That in persons possessing what is called the bilious temperament, the muscles, and such other solids as can be sufficiently examined, are remarkable for their solidity, firmness, and comparative lack of moisture, will not be denied; and such persons manifest in action unusual vigour and energy, and a corresponding degree of endurance under high excitement, hardship, and toil. To employ an expression rather common and homely than classical and elegant, but strong in its meaning and well understood, they are “tightly knit” in their entire organism—the bones themselves, perhaps, not excepted. All other things being alike, therefore, they are superiorly fitted to be pioneers and labourers, combatants

and fatigue men. But the same solid, tense, and compact condition of fibre which gives them unusual muscular vigour, endurance, and efficiency, confers a like superiority on their nerves and brain. Hence, when the latter organ is large, and its developments favourable, and when, in addition to this, it is thoroughly improved by a suitable education—under these circumstances such persons cannot fail to be remarkable for their talents and mental achievements. They are men of severe and persevering study, and ample scientific attainment; or they are distinguished in the direction of practical affairs.

As relates to the phlegmatic temperament, it presents a condition of things in most respects the reverse of this. In those who possess it, the fibres of the body are evidently lax; the globules which form them are no doubt deficient in solidity and firmness; the skin, muscles, and other solids are flaccid and soft to the touch; and the entire organism superabounds in fluids, especially in some sort of secreted and aqueous fluids, but not in blood—certainly not in *arterial* blood. And this moist and enfeebling condition prevails in the brain and nerves, no less than in the other organs of the body. Comparatively, the whole system is overwhelmed in a plethora of lifeless fluid. The issue is plain; a general unfitness for high and vigorous action exists in mind as well as in body. Be the cerebral development, therefore, and the education and training what they may, the mental faculties are of an inferior caste, and all sorts of mental action exceedingly moderate, if not imbecile in character.

From the foregoing considerations it would seem that what are called the bilious and the phlegmatic temperaments are the result of a condition of things of a nature altogether different from that which gives rise to the other temperaments. The bilious appears to be the product, not of a want of balance between any given parts of the system, whether solid or fluid, but of a state of unusually elevated tension and tone of all the solids. And the phlegmatic temperament arises from a contrary state of the same parts—a deficiency of tensity and tone in the whole of them. Although it has been said that, in the phlegmatic temperament, there exists a want of balance between the solids and the watery fluids, the latter being excessive in quantity, that is one of the *effects* of the temperament, not its *cause*.

But, as already intimated, my object in preparing this exposition is not so much to settle the philosophy of temperament as to show that I do not, as I have been alleged to do, derive its existence and character exclusively from the size

and predominance of certain leading organs of the body. As heretofore stated, I derive temperament from a twofold source. I include in my views of it a predominance, and a governing power, of elementary tissues, as well as of the larger and more compound organs, which they contribute to form.

To an unbalanced condition of certain portions of the large anatomy of the system, I add a similar condition of particular kinds of small and elementary anatomy. And the influence of these latter portions in modifying the constitution by the formation of temperament is the more forcibly exhibited by their being collected into large masses, in the form and character of abdominal viscera, thoracic viscera, and brain. When the digestive not only predominate in size, but also contain a predominate amount of blood-vessels or nerves, or of both united, they are the more powerful in their *functional action*—and the reverse. If their supply of blood-vessels or nerves, or of both, be small, that action is correspondingly feeble. Of the heart and the respiratory organs the same is true. And the brain, whether large or small, is augmented in power by being abundantly supplied with well vitalized arterial blood, through the instrumentality of large arteries. To these several attributes add solidity and strength, high tension and tone of fibre, and the functional power may be accounted complete.

THE HYDEBOROUGH MYSTERY.

A TALE OF A GREAT CRIME.

BY CAVE NORTH.

CHAPTER XVIII.

IN PRISON.

THE day after the fire Pennyfold was well enough to be conveyed from the hospital to his own home, but for three days he was confined to the house by his hurts. On the evening of the third day, he received a kindly little note from Letitia, thanking him in the name of Aunt Softly and herself for his “heroism” (that was the word she used) on the night of the fire. She regretted, in a post-script, that circumstances had happened to part them, but hoped that the day would soon come when they might again meet and “be friends as of old.”

The letter, although dictated by a simple sense of duty, and quite formal, was nevertheless very pleasant to Pennyfold. To a parched land a very small shower is grateful; and from the young man's heart the refreshing dew of kindness or of pity had for a long time been withheld. What delightful dreams he had that night, and how bright an awakening next morning!

As he was preparing to go to town, Mrs. Drupe remarked on his

more cheerful looks, and bade him be of good courage, for that perhaps the days of tribulation were at an end. The good lady was so used to the language of the Scriptures that she unconsciously made it the vehicle of her everyday thoughts.

Pennyfold walked townwards with a lighter heart and a brisker step than he had done for many a day. He found everything in Hydeborough going on pretty much as usual. But for a crowd of men loitering in front of the Town Hall no one would have thought that four short days before the borough had passed through the throes of a contested election, and had been the scene of a disastrous riot to boot—some of the misguided instruments of which were shortly to be put upon their trial in that place.

After walking round the Market-place, and noting how contentedly the glaziers were at work, rejoicing in the ill-wind that had brought them good, Pennyfold took his place behind his desk. He had nearly a week's work to make up, and he must stick closely to it if he would overtake it before night; and till noon he scarcely stirred. About that time, something unusual in the streets attracted his attention, and he had turned a moment from his books, and was looking through the window, when a man entered the shop, and said to Mr. Marshall—

“I suppose you have heard the news?”

“No,” said Mr. Marshall. “What is it?”

“They have discovered the body of Mr. Softly.”

“Indeed! where?” exclaimed Mr. Marshall.

“In Hockley Wood, I believe.”

“What do you think of that news?” asked Mr. Marshall, stepping round to his partner when the customer had left the shop.

“It is terrible!” replied Pennyfold, looking very pale and agitated. Then after a pause he said: “Go, and find out if it is true, Marshall, there's a good fellow.”

Mr. Marshall went, and presently returned, saying it must be true, as everybody was talking about it.

Pennyfold felt a sickening dread steal over him. What, he thought, if they should still fasten suspicion upon him, and he should be called upon to answer for his uncle's death? He tried to fortify himself by reasoning with himself that it was impossible. How could guilt be fastened upon an innocent man like that? But then there was the ready answer: it had been done before.

The poor young man, a prey to these fears, became hot and faint. He felt stifled in the close shop and longed for air; he must get out; he would go and find out for himself all about the thing. In the streets there were groups of men: he knew they were talking about the latest news respecting the murder; he wanted to join them and hear what they had to say, but he was too faint-hearted. Up one street and down another he wandered; presently he felt better, and thinking he had been out a very long time, he decided to return. He had, in fact, been out barely half-an-hour; but there are times when we live years in a few hours, and ages in a month or two.

As he entered, he met a man coming out, who eyed him very narrowly, and followed him again into the shop. He knew the stranger's business without being told, and when informed by him that he had a warrant for his arrest, Pennyfold manifested no alarm, hardly any surprise; he simply turned to his partner, and said: "Walk with me as far as the police station; heaven only knows how long it will be before I take a friend's arm again!"

Mr. Marshall went with him, heard him charged with the murder of Mr. William Softly of Acacia Villa, heard Pennyfold in a calm, clear voice protest his innocence, saw him taken away to the cells, and then passed out weeping, for he was a soft-hearted man. He heard a woman among the crowd at the door say as he walked away: "That's Marshall, his pardner; like enough he ought to be in too." A few steps farther on he passed a party of three, two women and a man; one of the former said: "He no more looks like a murderer nor I do, an' he so young too, and good-looking; poor young man!"

Mr. Marshall was not noted for rapidity either in regard to thought or to physical movement; when, therefore, he got back to the shop he sat down for a long time to consider what should be done. Then, thinking he ought to do something, he resolved to walk over to Scaleby to acquaint Mrs. Drupe with what had happened. When, an hour later, he arrived at Hawthornden, he found he had taken his journey in vain; Mrs. Drupe was out: she had gone to see her poor dear son, said Bridget.

Pennyfold was no sooner arrested than the news found swift feet ready to carry it to his mother.

Imagine the pale, afflicted woman, seated where she always sat between the window and the fire, with work in hand, and spectacles by her side. The door is suddenly opened, and Agnes, followed by a man, hat in hand, enters. Agitated, almost ready to drop, she stammers out something, the only portion of which that is clear to Mrs. Drupe being the name Pennyfold.

"What!" exclaims the mother.

The man advanced a step, touches his forehead with his hand, and taking up the word, says—

"It is only too true, ma'am—only too true. He's ta'en up for, as they say, a-murdering of old Mr. Softly, the late Mayor of Hyde-boro'."

Mrs. Drupe sprang to her feet without the aid of either crutch or stick, and stood with her left hand resting on the edge of the table, trembling violently—stood with wide eyes and dilating nostrils, her lips clenched, and her breast heaving tumultuously—stood, as it were, gathering together all her force to defy a cruel and calamitous world; then, in a choking voice, she exclaimed—

"My son accused of murder! Is the world mad?"

The man dangled his hat and answered nothing, not knowing perhaps which question to answer first.

"Where is he?" she asked.

“In Friday Street lock-up, ma’am.”

“Go round to Millocher’s, my good man, and order me a carriage, and ask them to have it here at once ; and you, Agnes, get me my bonnet and shawl.”

Agnes obeyed ; but when she returned with the things, she looked inquiringly at her mistress—at her almost mother, for she had had no other home since her childhood—and said :

“Dear Mrs. Drupe, you surely will not venture down there ; think, you have not been to town for years—it will be your death ; let me go ; things can’t be so bad as they say, and I will quickly bring you word.”

“No, Agnes ; you may come too ; but I must see my son, come what will. I must see the men, too, who dare accuse him of such a crime.”

She moved to the window, and looked down the village street to see if the carriage was coming. Murmuring, “How long they are !” she came back to the table, still using no support. Her calm, thoughtful eyes were filled with an unusual fire ; her fingers worked impatiently, and the corners of her mouth twitched nervously. Presently she turned again towards the window, and said—

“See, Agnes, if the carriage is coming ; we lose time, and the delay may be fatal.”

Just then the noise of wheels was heard. Mrs. Drupe caught the sound, and said : “Ah, it is there ! Come, we will walk to the gate.” Her limbs obeyed the thought, and she had reached the threshold, when Agnes, who during the whole of the scene had been like one in a trance, mildly reminded her of her crutch and stick.

“O yes, bring them,” Mrs. Drupe replied, and hurried totteringly down the path.

They took their seats in the carriage and were driven off, Bridget watching them in a kind of dazed amazement from the gate. Mrs. Drupe sat silently gazing through the glass in front of her ; the town lay like a panorama before them, part of it climbing the opposite slope ; she seemed to be trying to single out the building wherein her son was imprisoned, although it may be she was occupied with other reflections. Only when they had descended the hill, and there was no view beyond the converging hedgerows, did her thoughts and eyes come nearer home. She looked down upon her companion, and seeing her weeping, pressed her hand.

“Don’t cry, my child ; it is a passing trouble ; all will be well soon,” said the mother, who had as yet shed no tear.

“I’m weak, but I can’t help it,” said Agnes with a sob ; “it seems so strange and terrible ; and you walking so, as I never knew you do before !”

“I did not think of that,” replied Mrs. Drupe, relapsing somewhat into her abstracted mood ; “God truly has wrought a miracle in me.”

Then after a pause, during which a look of exaltation gathered over her face, as the sunlight steals over the mountain-tops, she exclaimed—

"Yes, it is so. Cheer up, my child! we are in good hands—we are in the hands of the Lord."

Presently they entered the town, crossed the bridge, and went rattling along Watergate, and in a few minutes drew up in front of the Friday Street police-station.

About a quarter of an hour previously, Pennyfold had been brought into the chief constable's room, and there confronted with a magistrate—Mr. Turnbull—who, after hearing some formal evidence, had granted a remand for a couple of days, and he was just about to be sent back to the cells when Mrs. Drupe arrived.

The meeting between mother and son was necessarily a painful one. Then, for the first time, the good woman broke down and wept. Pennyfold had already given way to emotion in the loneliness of his cell, and was, in consequence, calmer. Nevertheless, the sight of his mother's tears greatly moved him, and he had hard work to keep himself from giving way altogether.

When she had become somewhat calm, Mrs. Drupe, addressing Mr. Turnbull, who had turned away his head during the foregoing scene, as did also the few who were in attendance, hard-faced myrmidons of the law though they were, said—

"You surely, sir, cannot believe my son guilty of the crime attributed to him?"

The magistrate replied: "I would fain believe the young man innocent, and I fervently hope that he may be able to prove that he is. He will soon have an opportunity to do so."

"In the meantime you will allow him to come home with me."

"I fear I cannot do that, madam."

"Do you mean to say that you will take a young man who has been the best and most obedient of sons, and who has never willingly given his mother a single pang—that you will take and imprison him for a horrible crime, without a scintilla of evidence?"

"There is evidence, I am sorry to say, on which I am bound to order his remand for further examination," replied Mr. Turnbull.

"What is the evidence, and who are his accusers?" demanded Mrs. Drupe, with the dignity of a Roman matron.

"The evidence, briefly, is that a glove belonging to the deceased was found in a disused well within the curtilage of your house; that a fellow to the said glove was picked up in Hockley Wood; and that near to where that glove was found, the body of the murdered man—or what is taken for such—has been discovered. Moreover, in the pocket of an old coat of your son's, which was sold to an old clothes' dealer, was found a pair of spectacles and a case known to have belonged to the deceased. All this, without going into more detail, you must allow looks very suspicious when it is known that the prisoner was the last person seen in his company. There may be, and I hope there is, a perfectly good explanation for all this; but until such explanation is forthcoming, there is but one course open to me, and that is to detain your son. On Thursday, the case will be gone into thoroughly, and then—"

“But why all this circumstance and delay,” interposed the matron, grandly, “when the matter may be settled by a word from my son? You may trust his word; he never told me an untruth—not even in play!”

As the mother said this, a look of conscious pride lighted up her fine face: it quickly changed, however, to one of offended dignity when she perceived that several of those present smiled at her innocence: but there was a touch of pity, if not of disdain, in the look that, as it were, swept over them to the Justice, and rested appealingly on him, as one whose intelligence could be trusted.

The venerable magistrate was visibly embarrassed as he answered rather unsteadily—

“I am sorry to say it cannot be: the law must take its course.”

“The law!” exclaimed the matron, a warm flush mounting to her cheeks—“the law! what has he to do with the law—he being innocent? You, sir, whose place it is to protect the innocent—”

“Mother,” said Pennyfold, “putting his hand upon her shoulder, “say no more; he is right, the law must take its course. Do you, therefore, go with Agnes and consult with Mr. Marshall as to what is best to be done.”

Agnes, who had been standing aside, crying, now came forward and led Mrs. Drupe into the adjoining room, where Pennyfold was allowed to have a few minutes’ conversation with her. Then she and Agnes returned to Scaleby.

CHAPTER XIX.

PUTTING THE QUESTION.

Jerome Fangast heard of the discovery of the reputed corpse of Mr. Softly with something akin to horror. He was paying a visit to the Softly family when the news first reached him. After the fire at Acacia Villa, the family had taken up their temporary abode at “The Elms,” a rather gloomy house in the Cuckoo Road, a few hundred yards from their former dwelling. It belonged to a Hydeborough manufacturer who had of late years been obliged through ill health to spend the winter in the south of France.

He found Mrs. Softly much recovered from the shock to her system received the night of the fire, though still very frail. Letitia he never saw looking better. She was one of those delicate, fragile-looking creatures who seem as though the very first of life’s rude blasts would irretrievably ruin them, yet upon whom the buffets of fate and fortune fall with so light a hand that they are rather beautified than blighted by them.

Not only, however, was she looking extremely fresh and beautiful, but she was gayer and more entertaining than Mr. Fangast had ever known her to be before. She was franker in her manner to him, and he was not slow to attribute the change to the advance he had made in her affections in consequence of his gallantry at the fire. Nor was he probably much mistaken. Letitia was of a

romantic temperament, and she was the more likely to be acted upon in her higher emotional moods because she was really very little given to reflection. That part of her nature had yet to be awakened. What passed for reflection with her, as with others, was simply her dreaminess—also a result of her temperament. Very few women really reflect; they brood, they nurse the latent fire of emotion, and that is all they know about thought; but to a pure woman, of a right strain, emotion is often a better guide than reflection.

Fangast gradually became enchanted. It seemed to him as though the last few days had caused her to blossom into riper womanhood. Her bust appeared to be fuller; her eye was certainly brighter, and lent a more tantalising beauty to her face; then her voice, soft and sweet as it always had been, was mellower and more varied in tone, as though deeper chords of feeling had been awakened in her. So, at least, the young auctioneer thought, and his senses, naturally keen, had been greatly sharpened by the excitement of the past few weeks.

For a few minutes they found themselves alone, and the young man could not resist the temptation to declare his passion. Letitia was taken by surprise, although by no means blind to the effect she was producing upon him. She blushed, trembled, and faltered; in all of which Jerome found encouragement to proceed. He pressed for an answer; Letitia became more confused, and replied: "Not now! not now!" He was saying: "To-morrow?" when the door opened, and Jacob entered.

Never was man less welcome; Fangast could have annihilated him. As soon as he perceived that Fangast and Letitia were alone, Jacob quickly arranged the muscles of his face into the similitude of a smile, and strutting forward with his stagey gait, said—

"I fear I am interrupting a confidential *tête-à-tête*, but I thought you would be glad to hear the news—ahem! that is, that you would like to hear it, though so sad, of course."

"What is it?" asked both at once; Letitia with some anxiety, and with a sudden consciousness of her discarded lover knocking at the door of her heart. Jerome was less apprehensive; there was running along his nerves and filling his sensorium a quickening tide of feeling that almost amounted to joy. It arose from the consciousness that the fruit of his passion was ripening, and might soon be gathered—perhaps to-morrow! Any ordinarily depressing news, therefore, would have had little effect.

"William's body—or I should say his skeleton, for there is little else—has been found in Hockley Wood, and Pennyfold Drupe has been arrested for the murder."

"The body found, and Drupe arrested for the murder!" exclaimed Fangast; "Why—! There is surely some mistake."

"Oh, no; there's no mistake; he's in quod right enough!" replied Jacob with exultation.

"Pennyfold in prison!—and for murder!" exclaimed Letitia, with dilating eyes. "No, no! it is not true!—it is not true! It is

impossible ! You're joking—yes ? Speak, father ! Don't grin in that awful way ! Oh—”

Letitia had fainted, and Jacob, whom she approached as she spoke, caught her in his arms. Maria Goosey—who since the fire had been invited to take up her abode in the house as companion to Letitia and her aunt—came to her aid ; and as soon as she had recovered consciousness, had her conveyed to her room.

Fangast remained long enough to assure himself that Letitia was all right, and that there was no chance of his seeing her again that night, and then took his leave. He walked away from the house with a strange sickening feeling of dread possessing his whole being. What a change from the ecstasy of a short half-hour ago ! And mingling with his fear was a feeling of resentment against his mistress for being so moved by anything that could happen to one whom he had brought himself to hate. So true is it that whom we injure we soon learn to hate.

It was humiliating to Pennyfold's rival to find, after all he had done to make him contemptible in her eyes, that Letitia should still have sufficient regard for him left as to swoon on hearing of his misfortune. If she loved him—Fangast—she must hate what he hated. So he soliloquised.

He walked, without taking particular notice whither he was going, townwards, and presently found himself amid a group that still lingered about the Friday Street police-station. They were discussing the great topic of conversation, as a crowd will ever discuss a great crime, or supposed crime, so long as the world lasts ; and Fangast soon found that Jacob's news was only too true.

The auctioneer was troubled, and he walked about for more than an hour, asking himself what he ought to do. Finally, he resolved to take the advice of his friend Rice, the detective.

CHAPTER XX.

THE DETECTIVE AT WORK.

Mr. Rice regarded the profession of the detective as one of the fine arts. In the pursuit of the criminal he was influenced by no feelings of detestation of crime. On the contrary, he rather approved of crime ; otherwise there would be no criminals, and no detectives. The sportsman rather loves than hates the quarry whose life he seeks. So with Mr. Rice ; in his case, at least, it was art for art's sake.

He had no compassion—no pity. If the quarry were an ordinary criminal, he followed his trail with the modified pleasure of one who shoots rabbits. If the quarry were higher game—a great defaulter, a forger on the grand scale, or a secret murderer—his feelings, and with them his genius, rose to the occasion ; just as do the emotions of the hunter who finds himself on the track of an elephant, or of the king of beasts.

He was a man with the smallest modicum of what are known as

the tender feelings. The keenest sense in his whole nature was that of overcoming, and he was not happy unless in the keen pursuit of something. In a more primitive state of society he would have been a second Nimrod. In his younger days Mr. Rice had been an ardent fox-hunter; indeed, it was from a fall received while following the hounds that he had hurt his arm, and so crippled himself for life.

When he was engaged to find out what had become of Mr. Softly, Rice went to work with all his accustomed vigour—a vigour, by the way, seasoned with so much nonchalance that an unenlightened person, seeing him on his daily round, would have taken him for the most unconcerned person in existence, albeit he might be pursuing some victim to the death, searching out the haunts of a faulty clerk, or dogging the steps of a suspected husband or wife. But whatever the business, Mr. Rice never hurried; or at least he never appeared to hurry.

After Mr. Rice had occupied himself with the disappearance of Mr. Softly for a few days, and had mastered all the circumstances of the case, he came to the conclusion that the missing gentleman had not been done away with in the Fenian sense of “removal,” but that he had simply been spirited away, although by whom and for what purpose, he was far from being able to make out. He framed a lot of theories to account for this spiriting off, but none of them would exactly fit the case.

At first his suspicions had fallen upon Jacob, and he had begun to credit that artiste with having laid and been occupied carrying out a deep plot from the moment he first entered the town. But then, as we know, suspicion was fastened upon Pennyfold, and though he did not attach much importance to the finding of the first glove, yet when the spectacles and case came so singularly to light, and subsequently, in the following out of a supposed clue, the fellow glove was discovered, then the detective began to think he had been on the wrong tack, and that perhaps it might turn out after all that the old gentleman had been murdered. Still, after seeing Pennyfold’s demeanour, and hearing his account of what took place on the night of the supposed murder, he became convinced that if murder had been done the young chemist was not the guilty party; moreover, he believed he was innocent of any participation in the “removal” of his uncle; yet, strange to say, he was not so sure that the young man did not know something about the mystery. Indeed, he believed Drupe could explain everything if he would, but for some unaccountable reason—from fear, interest, or fidelity—his mouth was closed. Rice became so convinced on this point, that every little fact or circumstance that could be at all pieced on to the theory, even though it did not fit very well, he religiously built into it, and watched the growing structure with his wonted pride.

But having got so far, he could proceed no farther. In spite of the minutest inquiries, he had been able to discover nothing against Pennyfold Drupe; he had no bad companions, no doubtful connections, no vices that he could discover; he found those who had the

best chances of knowing him intimately ever—some that he was an enthusiast in his botanical and chemical studies, some that he was a little cracked, some that he was a milksop, some that he was a very good young man without reproach, some that he was a doubter (religious bigots these), and so on, according to the ever-varying standpoint of the speaker ; but of any blot or point whereon a criminal hypothesis could be built, the detective could find nothing—nothing, that is, but a tender inclination to his cousin Letitia.

As far as Pennyfold Drupe was concerned, Rice would have seen his way clearer if Jacob had been the one put out of the way instead of his brother. Shortly after the disappearance of Mr. William Softly, the detective had taken Jacob to London with him, with the twofold object of trying to trace the missing brother, and watching the other ; with the result, as regards the latter, that he returned to Hydeborough as certain as mortal man could be that his companion was as much mystified as anybody by his brother's disappearance.

But while the two were on their travels together, it happened that Jacob in his aimless, prattling way, frequently spoke of young Drupe's fondness for his daughter, and his determination that she should never be his, but Jerome Fangast's. These confidences led to talk about Jerome. Of course Rice knew him—who in Hydeborough did he not know? He knew, too, the story of his mad youthful escapade, and he was presently made acquainted with its consequences as regards William Softly.

Putting these things together, Rice began to ask himself the question whether there might not be something in this peculiar relationship to account for the mystery he was trying to unravel? A young man anxious for a match with a lady, either out of love for herself or her prospective fortune, and debarred her society by the missing man: he out of the way there is no further hindrance. Here was the one thing needed in the case of Drupe—the sufficient motive.

Rice put a case. Supposing Fangast really wanted Miss Softly for her own sake, or the money that would be hers, how was he to secure them? He knew the uncle would never give his consent to his marriage with Letitia, and if she married without his consent, the probable result would be disinheritance. William Softly was a good enough man, but he was human, and a man's human nature is deeper than his Christianity, if he has any. His only hope, therefore, of getting the girl and the money was by putting the old man out of the way. Pfui!

Mr. Rice whistled. Was he on the right track at last? It was highly improbable ; but then it was his motto to run down the most improbable clues.

On returning to Hydeborough, the detective made a point of becoming personally acquainted with Fangast. He found no difficulty in that respect, as the auctioneer was a public man, and by no means difficult of approach. Within a few days they were on good terms. Rice found his new acquaintance a "good fellow" and a

pleasant companion—so pleasant, indeed, that Rice soon began seriously to suspect that he was again on a wrong scent; and the more he wavered, the more he turned his thoughts again to Drupe. He watched him, and set others to do the same; he thought of having Hockley Wood carefully examined, and had selected a big-bodied policeman to go with him with pick and spade for the purpose; but after one visit to the Wood, he relinquished his plan, much to the chagrin of the able-bodied one, who was very anxious to dig up a body, and get part of the reward. The reason for this change of plan was that Rice had come back to his original idea, namely, that there had been no murder, but only an abduction. He therefore confined himself to watching the young suspect.

About this time a new light was unexpectedly thrown upon the affair, or rather a new mystification. One evening about dusk, Rice was approaching Scaleby by the path from Hockley Wood when, on nearing the stile on the confines of the meadows, he perceived that someone was sitting upon it, and that the someone, whoever it might be—something man-like, certainly—was waving his arms about as though to attract his attention. It proved to be Ben, Bridget's deaf and dumb lad. He was always called a lad, albeit of the age and stature of a man. Rice knew Ben, and was about to pass on without more recognition than a pat on the shoulder. But Ben took hold of his coat, and pointed over the meadows in the direction of the bluff upon which Mrs. Drupe's cottage stood, at the same time producing an inarticulate noise, the nearest approach he could make to speech. The detective followed Ben, who proceeded for about a couple of hundred yards, and stopped in front of Hawthornden. The grounds at this side formed a sort of terrace, banked up by a rough stone wall about as high as a man's head.

Rice looked at his conductor inquiringly. What Ben did next was to make believe to put on a glove; then, when the detective signified that he understood, to lead him to a part of the wall where they could clamber up and peep into the enclosure behind the house, and from that coign of vantage to point out to him the disused well before mentioned. Rice was interested; he signified his intelligence, and encouraged the deaf-mute to proceed. Ben now pointed towards the town, the lights of which were just beginning to glimmer, made believe twirl a moustache, then, making a circle with each index finger and thumb, put them to his eyes in imitation of spectacles.

The detective understood his dumb show, but signed to him to go on, as though he did not quite comprehend. Ben seemed distressed, and rubbed his poll anxiously; presently his eye fell upon a notched stick; this he seized and broke a little into shape; then, mounting a stone dislodged from the terrace wall, he mimicked to the life the action of an auctioneer conducting a sale.

Rice whistled, and Ben looked triumphant.

Could it be possible, Rice asked himself as he walked homewards, after putting a few more interrogatories to the lad, the responses to which convinced him that he had witnessed something material

to the unravelling of the mystery—could it be that Fangast had planted the gloves in order to incriminate Drupe? But for what purpose, unless to throw suspicion off himself?

The following day the detective got Ben to come to town with him and point out the man he wished to indicate as the one who had thrown the glove into the well at Hawthornden. The deaf-mute led the way to the office of Glib & Fangast, and pointed out the younger partner. Rice gave him money, and made him understand that he was to keep the matter to himself, which he promised to do.

The next time he and Jerome met, the conversation soon drifted into the subject of presumptive murder, and Rice casually dropped the remark that he believed the gloves found in Hockley Wood and at Hawthornden were “plants.” He watched closely to see what effect the announcement had upon his companion; he perceived nothing. “So, my friend,” he said to himself, “if you have anything to do with this affair, you are a cooler hand and a more ingrained scoundrel than I took you for.”

Rice deemed that he had got a valuable clue, and waited and watched. But weeks and weeks passed by without any further light being thrown upon the affair. He began to entertain the highest admiration for Fangast. If he was concerned in the murder, or whatever it was, and could baffle everybody like this, and go on with his business in the cool way he did, why he was one of the cleverest men that ever lived and committed a crime.

The detective at last became so fond of the auctioneer that he began to think that if he ever found proof that he was guilty of the murder of Mr. Softly, he should not be able to give him up to justice.

So he got to talk with him more freely than with anyone else; he lost even in his presence some of his usual professional reticence. He had referred to the “planting” of the gloves so often, that one night over their glasses—this was in Jerome’s own apartment over the business premises in Eastgate—the latter said with a laugh—

“I believe, Ted, you think I planted the gloves.”

“I do,” replied the detective.

“And what the devil do you think I planted them for?”

“That’s where I am at fault.”

“Well, I’ll tell you, old man; it was to spoil Drupe’s little game with Miss Softly, that’s all.”

“And you succeeded, eh?”

“Yes, effectually,” replied Fangast. “Now, what’s your price to keep the matter to yourself?”

“That’s a question,” replied the detective thoughtfully. Then, after a pause: “You know nothing about the old man?”

“Nothing whatever” (frankly).

“Then you need not fear that I shall mention the matter.”

Such was the position in which matters stood when the supposed corpse of the ex-mayor was dug up in Hockley Wood.

To be continued.

THE HERO OF KHARTOUM.

THERE'S trouble abroad in wild Soudan—

Be still, sad heart !

The Mahdi has spoken, the tribes are out,
They rush on their foes with frenzied shout,
And, the prophet to honour, them utterly rout ;
Men look at each other, and wink, and blink,
And question, Lo, here ! what can we think !
O England, merry England !

The wild Soudan is a blaze of war,

Be still, sad heart !

The yoke of the tyrant is shorn, and lo !
The blood of the innocent, high and low,
Babe at the breast, and woman, must flow.
Out on the caitiffs ! What shall we do ?
A prize to the one who will tell us true,
For England, merry England !

Thousands are shivering there in the heat—

Be still, sad heart !

In Sinkat, in Berber, in far Khartoum
Men work with a prescience of their doom,
While hoping for succour that ne'er will come :
They have heard of the Might of the potent arm
Whose name was once a power to charm :
O England, merry England !

The cry of the slaughtered is in the air—

Be still, sad heart !

Their groans will soon be stilled in the grave :
Is it ours to stretch out a hand to save,
Ours—ours for them to spare one brave ?
Our ships are ready, the wind blows free
To bear our merchandise over the sea,
For England, merry England !

Not one brave heart to the rescue, then ?—

Be still, sad heart !

Yea, one brave heart, and he is a host :
England, but for him thy ancient boast
Had been for ever and ever lost !
But one brave heart will stand in the breach
And again us the old-time glory teach,
For England, merry England !

Our hero is out in wild Soudan—

Be still, sad heart !

Will you help us, they said, in this hour of need ?

He asked for nought better than suffer and bleed
For his country ; and lo ! on his desert steed

How he hurries away, on his mission to bless,

Alone through the sand-choked wilderness,

For England, merry England !

Hero in peace as hero in war—

Still, still, sad heart !

His name is echoed along the Nile,

And the fury of strife is stilled awhile,

While babes in the cradle are seen to smile,

As “Gordon, great giver !” the shout is heard,

And thousands on thousands take up the word.

O England, merry England !

Khartoum is a-blaze with fires of joy—

Be still, sad heart !

Our friend and saviour has come, they cry ;

The sick look up as he passes by,

And the tears of the weary will soon be dry ;

For he has given his word, 'mid joy and revel,

That he will hold the balance level,

For England, merry England !

To save them or perish, that is his task—

Be still, sad heart !

Was ever a greater one given to man

Since Cain-like strife in the world began ?

But a hero may do what no lesser can—

A hero at work in these latter days !

'Tis a sight that fills the world with amaze.

O England, merry England !

There's rapine and slaughter along the Nile—

Be still, sad heart !

The hosts of the Mahdi are closing about

The city, but slowly, in fear and doubt,

For the captain there is a lion stout,

Whose fiery glance is a sword of flame

That turns their hearts and their feet to shame.

O England, merry England !

Thrice and again he has beaten them back—

Rejoice, sad heart !

Was ever by sheep such prowess done ?

Were ever by slaves such victories won ?

Their hearts melt away at the sight of a gun ;

But the soul of the hero inspirits them all,

And 'fore them the hosts of the false one fall.

O England, merry England !

Twelve moons but a day he has kept them at bay—
Be still, sad heart !

Twelve moons but a day, and he looks to the north
And sends his trusty messengers forth :

Oh, what is old England's honour worth ?

Twelve moons but a day, and succour is none :

A hero must fight his battles alone,

For England, weary England !

Sinkat and Berber have ceased to cry—

Be still, sad heart !

You, too, they have left to meet your doom ;

But come what will, in fair Khartoum

One trusty Briton shall find his tomb—

Shall find his tomb, or save you still,

As the Lord of life and battles will.

O England, merry England !

They have girt him round with a band of steel—

Down, down, mad heart !

Food is scarce, and the weak-kneed cry :

“ This England of yours, so proud and high,

Hath she no succour to send us ? ” “ Fie ! ”

The hero said ; “ they are weighing the price ;

’Tis meet that a mercantile nation be nice ! ”

O England, merry England !

Sounds of battle come from the north—

Be still, sad heart !

Hath she sent her armies to rescue, then ?

Yea, they are coming from thorp and glen,

And soon ye shall hear the shock of men :

With blare of trumpet, beat of drum,

Hark ! England's trusty warriors come.

O England, merry England !

Scot and Saxon and fiery Celt—

Be still, sad heart !

I see them coming, the sturdy band,

Shoulder to shoulder, hand to hand :

Oh, were these walls with such warriors manned !

Scot and Saxon and fiery Celt,

How ’fore them the foeman's hosts would melt.

O England, merry England !

The foeman is on them, the desert swarms—

Be still, mad heart !

Oh, the stalwart arm ! Oh, the steady knee !

See, see, the dark-skinned warriors, see—

They slacken, they waver, they break, they flee !

Oh, for an hour of that fierce joy !

’Twould make me again a stripling boy !

O England, merry England !

The night falls fast : no more, no more !
 Hush ! hush ! sad heart !
 They come too late ; the hour is past ;
 The traitors have beaten me quite at last,
 And ere they reach us the die is cast.
 O army of heroes ! ye fight in vain ;
 Judas hath scored the trick again.
 O England, merry England !
 And my poor children, trusty and true—
 Down, down, sad heart !
 The Lord in His mercy have you in care :
 I, doing my worthiest, thought to spare
 You the death of the sword, or worse : but, there !
 Death cometh to all, or soon or late,
 And he suffers the most who fears his fate.
 O England, merry England !
 There's gnashing of teeth in wild Soudan—
 Be still, sad heart !
 Fought ! how we fought 'mid blinding sand !
 How we conquered the desert and gained the strand,
 And sighted the steamers, and quickly manned,
 And rushed up the river 'mid shot and shell
 To hear o'er his grave the foeman's yell !
 O England, merry England !
 But draw we a curtain o'er the scene—
 Be still, sad heart !
 Was ever for England so sad a day ?
 Warriors weep, and strong men pray :
 Oh, are we come to our dotage—say ?
 Dotage ? No ; but in our councils sit
 Men more for the distaff fit.
 O England, weary England !

THE REVENGE.

THE squire has murdered the noble lord,
 He wished to go forth with a knightly sword.
 He slew him at night in the darksome wood,
 And the body he flung in the Rhine's deep flood.
 He has cased himself in the armour bright,
 And mounted the steed of the murdered knight.
 Now over the bridge as he hotly springs,
 The good charger rears, and his rider flings ;
 And when the gold spurs are stuck into his side
 He hurls him into the dark rolling tide.
 With arm and with foot how he struggles in vain !
 The armour he coveted turned out his bane.—UHLAND.

Book Notices.

The Chemistry of Cookery. By W. MATTIEU WILLIAMS. London: Chatto & Windus. 1885.

Here is another work which will be welcomed by all who wish to see the subject of the preparation of food reduced to a science. For no one will contend that anything worthy of the name of culinary science had any existence up to within a comparatively recent period. If here and there a man like Count Rumford did make an effort to formulate a theory of certain operations, his knowledge remained practically locked up in his own breast; while a purely empirical art of cookery flourished merrily. And even now, with the land dotted with Board Schools, and young ladies of the labouring classes having the latitude and longitude of Seringapatam at their tongues' end, the number who can boil a cauliflower (to say nothing of frying a sole) properly is alarmingly small—a condition of things which must persist so long as cookery is performed by rule of thumb. Mr. Mattieu Williams explains the why and the wherefore of each successive step in any given piece of culinary work perspicuously and pleasantly: and the value of knowing why anything is done it would be hard to rate too highly. Every mistress of a household who wishes to raise her cook above the level of a mere automaton will purchase two copies of Mr. Williams's excellent book, the one for the kitchen and the other for her own careful and studious perusal.

The Common Sense of the Exact Sciences. By the late WILLIAM KINGDOM CLIFFORD. London: Kegan Paul, Trench, & Co. 1885.

The great brain which conceived and the hand which penned what forms the groundwork of the volume lying before us rest still and cold in the dust as, strangely enough, do those of the man who was originally selected to complete what Clifford left unfinished; but the master-mind is evident in the work, even in the comparatively fragmentary condition in which it was left when its author died, all too soon, at Madeira. In a preface signed "K. P.," the last editor or co-author gives a succinct history of the whole work, and refers to his own share in it in terms which a perusal of his contributions shows to be quite needlessly apologetic. He has, if we may so speak, caught the true Cliffordian spirit, and much of his exposition is not unworthy of the master himself. Anyone familiar only with the works on "Natural Philosophy" of twenty or thirty years ago, who will take up any recent work on physics, cannot fail to be struck with the revolution which has taken place in the treatment of the entire subject. It is as an introduction, if we may so speak, to the physics of to-day that "The Common Sense of the Exact Sciences" is intended to serve. Clifford's original intention, wisely abandoned, was to entitle his book "The First Principles of the Mathematical Sciences Explained to the Non-Mathematical," for certainly the book, as it stands, must go over the heads of those who do not

possess a certain familiarity with algebra, geometry, and trigonometry. Not that such knowledge need be profound, but, at any rate, in an elementary form, it must exist. The book is divided into five chapters. I. and II. (on Number and Space) are substantially as Clifford left them. He was also responsible for half of Chapter III. (on Quantity), as he was for Chapter IV. (on Motion), as originally left, but which has been practically re-written by Professor Pearson, who is also the author of the latter half of Chapter III. and the whole of Chapter IV. (on Position). This last chapter, we may mention, is in parts a really admirable example of scientific exposition, which will suffer nothing in comparison with those preceding it. Every one who wishes to enter intelligently into the new world of physical science opened by those intellectual giants, Sir W. R. Hamilton, Clerk-Maxwell, Sir W. Thompson, and their compeers should obtain this latest addition to "The International Scientific Series" without loss of time.

Voice Use and Stimulants. By LENNOX BROWNE, F.R.C.S., ED.
London: Sampson Low, Marston, & Co. 1885.

In the volume before us Mr. Lennox Browne has collected a vast mass of statistics on the subjects of drinking and smoking, from no less than 380 professional vocalists, whose own replies to his questions he gives in a considerable number of cases. As the result of his investigations, he comes to the conclusion that a singer should be a teetotaler and a non-smoker. All vocal musicians, professional and amateur, who are content to do without any stimulants whatever, may find their justification for such action in Mr. Browne's book.

The Child's Voice. By EMIL BEHNKE and LENNOX BROWNE.
London: Sampson Low, Marston, & Co. 1885.

This is a work which must address a considerably larger public than that which we have just noticed, and which contains really valuable information as to the training of the voices of boys and girls. As in the preparation of his "Voice Use and Stimulants," so, in the present volume, Mr. Browne seems to have appealed to a very extensive circle of professional vocalists for information; and their replies, of course, add both to the value and interest of his book. It may be accepted as a safe and trustworthy guide by all interested in musical education of the young.

Facts and Gossip.

THE prize of one guinea for the best Essay on the Utility of Phrenology has been awarded to Mr. H. Bell, of Llantilis Crossenwy, Abergavenny. The absolutely best essay out of the number sent, however, is by Mr. J. Webb, of Leyton, Essex, but he disqualified himself for taking the prize by making his article too long. Several other essays are very good, and ran the winner very close for the prize. Two in particular are worthy of commendation, one by Mr. F. C. Barratt, Margate, the other by Miss C. Lowries, Battersea.

The winning essay will appear in the July number of the PHRENOLOGICAL MAGAZINE. In an early number another Prize Essay Competition will be announced.

A PICTURESQUE and venerable figure has just vanished for ever from the promenade at Blackpool through the death of Dr. Spencer T. Hall, best known, perhaps, to most people by his literary pseudonym of the "Sherwood Forester." Dr. Hall, who was of Quaker blood, spent his childhood in a locality which boasts the presence of Newstead Abbey and Hardwick Hall, and the lad, at an early age, not insensible to his surroundings, was fired with literary ambition. His great hero seems to have been Benjamin Franklin, and after various youthful escapades, induced by the perusal of the wise American's struggles for bread and fame, young Hall followed Franklin's example, and became a compositor. This was at Nottingham, a town which during the first two or three decades of the century was the centre of considerable literary life. Here the young printer made many friends, and, when only sixteen, rushed into print in the columns of the local press. The lad's home was within the ancient boundary of Sherwood Forest, and that led him to dub himself the "Sherwood Forester." The Howitts, who were at that time settled in Nottingham, encouraged young Hall in his literary aspirations, and through their kindness he met at various times Wordsworth, Allan Cunningham, Alaric Watts, Miss Milford, and other well-known people. When quite young he became joint-editor of the *Sheffield Iris*, and also began to embark on the making of books, such as the "Sherwood Forester's Offering," the "Peak of the Plain," &c., which rapidly won favour on account of the vivid delineation of peasant life and rural scenery which distinguish them. For some years the "Sherwood Forester" visited most of the large towns of England and Scotland in the capacity of a lecturer on "Mesmerism," and whilst at Edinburgh on this errand he made the acquaintance of Combe, Gregory, Liebig, and Robert and William Chambers. He was a great believer in the efficacy of mesmerism from a medical point of view. His most illustrious patient was Harriet Martineau, whom he cured of a long-standing ailment. In her autobiography Miss Martineau refers to her strong faith in mesmerism, and to the irritation created among many of her friends by her advocacy and practice of it. Dr. Hall was also a practical phrenologist, and was a popular and enthusiastic lecturer on the subject. In 1845 Dr. Hall settled in London, where he continued to pursue his literary avocations. After the Irish famine, Dr. Hall paid a visit to the Emerald Isle, and recorded his impressions in "Life and Death in Ireland." The "Sherwood Forester" was a shrewd, gossipy, genial man of letters of the attractive but fast-vanishing type of which the ever-young Thomas Cooper may now be said to be almost the last survivor.

THE phrenological developments of Spencer Hall were rather marked and distinct. He had rare affections, strong attachments,

and more than average sociability of mind, and exerted a very distinct, social, domestic influence. When aroused by opposition or necessity, he manifested unusual spirit and resolution, but his normal state of mind was that of mildness, kindness, and gentleness. His sympathies were universal; he took an interest in almost everything and everybody; his whole character was mellowed and modified by his sympathies, in fact his strongest moral feeling was that of tenderness. He had a due degree of respect for the superior and the sacred, was steady to his general purposes and plans, had self-reliance and independence of mind, especially when putting forth his peculiar views. He had more courage to vindicate his opinions, and was decidedly ambitious to please, to make friends, and to be popular. He had strong Imagination, rare descriptive abilities, and capacity to enlarge upon his thoughts and knowledge. All his intellectual faculties were fully developed, while the central brain in the forehead was specially large. He was remarkable for his observation and his power to acquire knowledge, and to judge correctly of things. He had both the capacities for science and literature; his ability to acquire knowledge, and his memory of what he saw and did was very accurate. He had rare gifts to compare and illustrate; the organ of Comparison was specially developed; he discerned the difference in things at once; could analyse character accurately; could diagnose disease correctly, and had an intuition of mind that gave him great penetration. He was fond of scenery, had a good memory of places, was fond of experiments, and delighted to test everything, and reduce everything to its most perfect application. He was choice in the selection of language, and although not a copious speaker, yet he was clear and distinct in his utterance. Having naturally a strong constitution, he possessed much magnetic power and personal influence, which enabled him to have a marked control over other people and to exert a distinct influence wherever he went. In his latter days he became more mild and gentle, partly from too severe an exertion of his constitutional powers in earlier life; hence he was not so distinct in his influences nor so forcible in his character as in his prime, but was noted all through his life for his kind, gentle, sympathetic, domestic nature, for his general ambition to excel and desire to be popular, for his rare abilities to acquire knowledge, to describe character, and to explain and teach others.

SIR JOHN LUBBOCK, the naturalist, continues his curious experiments with his dog, and he hopes in time to make the creature as accomplished as the average biped. It is about eighteen months since he began the education of this wonderful poodle, Van. His idea was that the dog, if he wanted anything, should ask for it, and as the bark might not be intelligible, a series of cards were arranged by which he might make known his desires. Thus a card labelled "Food" is laid within his reach, and when he is hungry he takes it up in his mouth, and brings it to his master. In the same way, if

he wants to get out he picks up a card with the word "Out" upon it, and brings that up. Another and very favourite card with him is labelled "Bone," for its presentation is followed by the bestowal of a toothsome morsel. The pieces of cardboard are about ten inches long and three inches wide. Having succeeded in teaching the animal so far, Sir John has been lately trying experiments in order, if possible, to teach it to distinguish colour. But this has hitherto, he says, proved a failure. One circumstance, however, militates against the success of the education movement—Sir John's recent marriage to a young and beautiful woman. Before that event Van used to sleep in his master's room, and many opportunities for giving lessons were found. Now Van is banished to his own mat, and has grown sulky. At all events the colour experiment has failed.

GORDON was not one of the one-eyed heroes of history. Here is what Mr. Stannard says of the extraordinary fascination of his eyes : —"What eyes they were ! keen and clear, filled with the beauty of holiness ; bright with an unnatural brightness ; their expression one of settled feverishness ; their colour blue-grey, as is the sky on a bitter March morning. I know not what effect those eyes had on all whom he came in contact with, though from the unfailing and willing obedience with which his orders were carried out, I fancy that to some extent he unconsciously mesmerized nine out of ten to do his will, but I know that upon me their effect was to raise a wild longing, a desperate desire to do something, anything at his bidding. It was not an unpleasant or uncanny sensation ; it was not that any evil thought or suspicion lurked within the windows of his brave and pure soul. His power was the power of resolute goodness, and it was strong—so strong that I am sure had he told me to stand on my head, or to perform some impossible feat, I should certainly have tried my utmost to accomplish it, without giving a moment for reflection as to whether the order was reasonable or no.

DR. THURING, before the New York Academy of Anthropology, discoursing on involuntary life, said : When the will surrenders its control the involuntary life begins. Somnambulism and the trance are phases of it. It was really the true life. Hypnotism was a kind of involuntary life, and was produced by giving one's entire confidence to another of superior will-power. If the human mastery is so perilous, so much the better reason for understanding it. People should open their eyes and look into it, and not turn sceptically away. If one soul can possess another at this day there can be no doubt of there having been in olden days a demoniacal possession. There is no mystery about it—there is no need of mystery. Hypnotism has fallen into disrepute because it has been practised by mountebanks. What is known as panic is a trance. This question of involuntary life is a matter of education. The first time a person is subjected to the influence of another's will he may be aroused before being entirely released by a mental action, the second time

he is more controllable, and the third or fourth time he is entirely so. Intensity of thought in one direction produces vacuity of thought in another, and a trance may be artificially induced by anticipation. The helmsman dozing at his wheel is an illustration of involuntary life.

ON the subject of "colour-blindness," to which reference has recently been made in these pages, a correspondent says: "A very large proportion of the cases of so-called colour-blindness is, I am convinced, due to ignorance, and, in confirmation of this opinion, there is the undoubted fact that it is rarely found in examination of female candidates. If colour-blindness is an organic defect of the visual apparatus, surely it ought to exist in somewhere about the same ratio in the male and female. I cannot just now quote the figures, but some have been published showing how much smaller the ratio is in females. My attention was some time back called to the subject by having to examine a large number of candidates, and I was surprised at the amount of colour-blindness that could be made out if mere inability to detect the proper colour was considered sufficient. I don't for a moment deny the existence of genuine colour-blindness; but I do contend that the genuine defect is a rare one. My suggestion is that instruction in colours and their names ought to form a distinct item in the curriculum of all elementary schools. For all I know it may now be taught to boys; if so, I feel confident that we may soon look out for a very diminished quantity of colour-blindness. With our vast marine and railway interests the subject is worth consideration."

Answers to Correspondents.

[Persons sending photographs for remarks on their character under this heading must observe the following conditions:—Each photograph must be accompanied by a stamped and directed envelope, for the return of the photographs; the photograph, or photographs (for, where possible, two should be sent, one giving a front, the other a side view), must be good and recent; and, lastly, each application must be accompanied by a remittance (in stamps) of 3s. 6d., for six months' subscription to the MAGAZINE.—ED. P. M.]

M. A. H. (Leeds).—This photograph shows a very social kind of woman. She is fitted for the domestic circle and for household management. She is shrewd, practical, and industrious, but is not one likely to show brilliance as a scholar. Her memory is poor, her observation weak, and her language not full and copious; but what she knows she knows well, and what she says is quite well understood. She is a good worker, has a great will of her own, and is seldom still. Is very kind-hearted, naturally honest and straightforward, but not always as cautious as she might be, and sometimes indiscreet in what she says. Is generally good-tempered, but can be very forcible when stroked the wrong way.

D. T. P. (Aberdare).—This young man seems to have a good deal of general ability, but the photograph is so indifferently good that it is difficult to judge well. He seems to want sending out to grass in order to strengthen his bodily powers; this done he would probably develop more than common intellectual power, especially in the line of construction, invention, and the like. He also possesses uncommon power in drawing, designing, sculpturing, etc. He would do well to devote himself to one or other of these branches. He has good qualifications for scholarship, but he will do better in philosophy and mathematics than in the physical sciences. His moral and social organs are well and apparently evenly developed.

J. L. (Kensington). — You have some brilliant qualities, while labouring under some disadvantages. Your intellect is a strong one with many good points, as, for instance, wit, skill in contrivance, musical ability, language, organizing power, critical acumen, taste and imagination. You have also more than common imitative power, and can do almost anything you see done. In addition, you have special qualifications to please and make yourself agreeable. You are also very quick in thought and action, and are a great acquisition in the drawing-room. But you are subject to some ups and downs of health, which affect your spirits and your temper. You are naturally sympathetic, kind-hearted, respectful, rather hopeful, and quite sociable. Are not wanting in energy when in good health. Have some artistic and literary ability.

Fog (Belfast).—There are two directions in which you are greatly talented, namely, in the direction of art and in mechanics. You should go to work in one or both of these channels, and you will succeed. You have good will power, are determined and persevering. You have energy, too, but it is of the quieter, steadily-working kind rather than of the blustering, rattling sort, but it will tell in the long run. You will manifest some gifts in oratory, possibly in poetry, and might succeed as a writer or in the pulpit; but you should be a worker. There is another way in which you might make your mark, but it would not be advisable to take to it—it is your gift as an entertainer. You are proud (perhaps too proud), high-minded, sympathetic, religiously inclined, and would prefer to live a true moral life, and exert that kind of influence rather than the reverse. If you are content to work, you need not despair of the result.

W. H. B. (Macclesfield).—This young man appears to have a well-balanced organization both mentally and physically. He is fitted for hard work and for a responsible position. He would do well to avoid sedentary work or trade of any kind in a small way. Is best adapted for wholesale trade and for doing things generally on a large scale. He is eminently fitted by his energy and general intellectual abilities for taking charge, having the management, and being the leader. Probably his best gift of all is for engineering, surveying, contracting, and work in that line. He would also make a good architect, builder, or shipwright. He has very large Constructiveness, good powers for design and organization, and much

general inventiveness. He will never be at a loss how to do things, and will with time develop a great deal of originality. Is orderly, neat, tasteful, fond of style, quick to see differences, and to suggest improvements; has a good general memory, is witty, and of better understanding than common.

W. A. (Darlington).—You need pulling together, hardening, and energising. Your physiology may have been good originally, but if your photograph tells truth, you have run down considerably, and will need to use all your will and intelligence to retrieve your lost position. You appear to have been indiscreet in some way. Either you have not taken outdoor exercise enough, or your occupation has been such as to prevent a healthy, vigorous development. It is not that you are so unhealthy as that there is a lack of functional vigour, and consequently vigour of thought. Your phrenological developments are uneven, and do not work altogether for strength. You have good powers for scholarship, and would make a good teacher or preacher. You seem to be unselfish in regard to money matters, and not at all of a grasping nature. You are kind-hearted, have a strong sense of justice, and are very affectionate; but you need to exercise more will-power, be more proud and determined, and let ambition stimulate you to a much greater extent.

H. E. P. (Edinburgh).—This is a man of great natural ability, and he should make his mark in some way or other. He possesses great “drawing” power, and should be a kind of social magnet; is full of enthusiasm, and as a speaker would be sure to win others to his cause; has a good many of the natural gifts of the orator, and should by all means try his powers in that line. There is some Celtic blood in his veins, and he has the fire and fervour peculiar to that race; all that he needs is practice. He would succeed as an advocate, would also make a good preacher; but the platform and the bar—there is his place. He is strongly moral in his inclinations, refined in his feelings, and capable of high and solid culture. He should lay out a strong and uphill course in life for himself, for if he has not hard work and a good cause to fight for, he will spoil; and then there will be a strong man spoiled.

H. G. A.—This child is not well-balanced. The superior part of the head is too large. The base is not sufficiently large, for it is not broad from ear to ear, but very broad at the organ of Cautiousness. The neck is too short altogether. There is a want of balance of power, and a constitutional weakness that may continue through life. The child is too intelligent, has too much superior brain; has not enough will-power, self-government, and continuousness of mental action. Probably the reason why the child does not talk is owing to the pressure of the superior brain upon the basilar brain, so there is not the capacity to control speech there otherwise would be. With care, bathing, rubbing, and keeping the intellectual powers quiet, the child may become stronger, and finally articulate well, but it will only be with superior care. It should not be sent to school or be required to study and exercise the mind for a long time.

THE
Phrenological Magazine.

JULY, 1885.

THE MARQUIS OF SALISBURY, K.G., P.C., D.C.L.,



AS a large and well-proportioned body, and his presence commands respect. Although large, yet he is not particularly muscular or positive in the outline of his person. He is tall and rotund in form; is easy, and not angular, in movement; and is not well



adapted to great physical exertion, although well qualified to enjoy life. His body is larger in proportion than his brain, hence he requires considerable motive to stimulate him to vigorous action. There are no indications of eccentricity, for his cranial developments are not irregular or imperfectly mani-

fested. He is not made up of points and angles, and his mental temperament is not so predominant as to render him very active or uneasy. If ill-natured, he would be more liable to be sullen than passionate and quarrelsome.

His head is elliptical and high rather than long, and it is well poised on his body, with a round, well-formed neck, which aids much in giving him a manly appearance. His head being broad indicates suspicion and economy rather than the reverse; but he has so much force and impulse that he is likely to be rash in expression, if not in action. He is not in a hurry to make up his mind; yet so long as he is opposed he will cling to his opinions very tenaciously, but he requires opposition to render him positive. His quality of organization or temperament is not favourable to prompt decision or continuous mental action. He may be impulsive and easily irritated without having durability of temper.

For a positive, vigorous, executive, hard-working, and enduring man, he needs more of the motive mental temperament. He takes things easy when he can, and is liable to be confused when excited; besides, his memory does not serve him well; if he wants to avoid mistakes it will be necessary to put everything in writing; for although he may have good judgment and understand what he is going to say, yet his memory is liable to fail him in facts, just when he wants to use them.

The indentation in the centre of his forehead, from the root of his nose to the top of his forehead, indicates that his mind does not act with sufficient unity. His power to compare, combine, analyse, and take advantage of circumstances, is not great. He has not enough intuition to render him particularly sagacious and penetrating; he is liable to make mistakes in consequence of his poor memory of facts and statistics; hence would appear careless in his statements. More circumspection and cautiousness, with less impetuosity, would enable him to present his ideas more definitely and correctly; for he is liable to act from impulse, and as his feelings dictate, rather than from reflection. His head is high in the crown, indicating great ambition and desire for prominence and appreciation. His fair Benevolence makes him anxious to add to the happiness of the inferior classes, and he is disposed to manage any general project where no individual sacrifices are to be made; for he prefers to add to his accounts rather than diminish them. He can reason on a subject and explain a principle better than he can apply a principle. He is full of new ideas and suggestions, but they are not always adapted to the occasion. His perceptive

powers are good that take cognizance of the condition of things, and help him to judge of the value of things, yet he is not a close observer of the mere existence of things; hence his conversational talents, although good, are on general rather than definite subjects. He will do the best when he is not confined to details and definite subjects and statements. He can generalise and explain, but does not appear to a good advantage when catechised or criticised. His moral brain is favourably developed in height and fulness, but it is not long and level enough on the top to give great moral power and religious fervour. Veneration is the largest moral organ, which unites him to the past, and helps him to make distinctions among men, and give Conservative rather than Radical ideas.

Hope appears large, favouring enterprise and a sanguine disposition. The combination of all his forces of body and mind give him more than ordinary power and influence, and had he more definite observation, tenacity of memory, power of analysis, intuitive perception, and mental connectedness, and power of protracted investigation, he would use his abilities to a much better advantage, and make a much better leader of his party. He will, however, do his best, for he is a genial, well-disposed man.

The Marquis of Salisbury is sufficiently well known to need no biographical notice.

UTILITY OF PHRENOLOGY.

(*Prize Essay.*)

ONE of the great causes why phrenology is not made use of to the extent of which it is capable is that people do not believe in it thoroughly. To a thinking and observing man, however, the more he studies it, and practically applies it, the more confident he becomes of its truth. Everyone can tell for what use each part of the body is designed—the eye for seeing, the tongue for talking, the feet for walking, &c.; but to the different parts of the brain people generally could not assign their proper functions. Phrenology steps in to enlighten us on this point; and the men who, with great patience, observation, and thought, have enlightened us through phrenology, deserve our warmest thanks, and not our ridicule. True, there have been many blunders made by phrenologists; but this does not reflect any discredit on the science, but on the men who have attempted to delineate character without first having studied it properly. It is an abstruse science; and the man who has only half a knowledge

of it will be sure to make serious blunders in its application. To learn the location of the various organs is not difficult, and to know what each bump separately would denote is comparatively easy; but in the severe thought necessary to understand the action and reaction of one organ upon another is where the phrenologist who is not thoroughly accomplished will fail.

The uses of phrenology are various.

I. Its study leads to correct ideas in regard to the mind. This lies at the root of treating the mind properly in all its phases. It is the doctor who understands best the organs of the body and their functions who can prescribe best; and it is the man who has the most correct notions of the brain and the mind who will be best able to train and treat his mental powers, and to use them. Through the influence of phrenology lunatics and idiots are now much better understood than they used to be; and as a necessary consequence many more are nowadays cured. The strength of a chain is gauged by that of its weakest link; and so the whole mind becomes weakened and worthless by the disease of one organ. The phrenological doctor can easily put his finger on a weak, or diseased, or inflamed, organ, and this very power helps him to understand what is the weak link, and goes a long way in applying the remedy. It will not only help to cure lunatics, but, what is still better, it will prevent insanity; and not only that, but it will teach every man how to strengthen his mental capacity. When a person is told which organ is weak, and how to cultivate and strengthen it, he is told how to strengthen his whole mind. Phrenologists say that one organ, or part of the body, should not be cultivated at the expense of other organs; but each and every organ ought to be cultivated harmoniously, and as nearly as possible equally. This is the way to have a well-balanced mind and a well-balanced body, where the stomach does not digest too much or too little food for the whole body; and so of the other organs, each one doing its part with neither too great vigour nor too little. People generally go to a physician after they become ill, but the better plan would be to consult him previously; get him to tell where your system is weak, and how to strengthen or invigorate whichever part seemed most liable to be attacked by disease. So people ought to go to the phrenologist to find out how to strengthen the whole mind, what trade they are best suited for, who to marry, and how properly to educate their children. It is generally after they have blundered in choosing a profession, and spent many years of misery and ill-success, that they will consult

a phrenologist; just as many people will allow sick persons to come almost to death's door, and suffer much unnecessary torment, before sending for the doctor.

2. One of the great uses of phrenology is helping young people to choose a profession. Lads are generally sent to a trade about fourteen. It must be patent that at that age they are not competent to judge of their own powers, and what trade they would succeed in. They sometimes choose a trade because their father works at it, or they take a fancy to it, or because it is easy, or clean, or respectable, or money is easily made in it. The phrenologist takes into account everything—his talents, education, health, strength, weaknesses—and says which trade he is best suited for, taking all these into consideration.

3. Another very important use of phrenology is helping a man to choose a wife, or a woman a husband. When one considers how many unhappy marriages there are, and how much misery is caused by unsuitable marriages, surely it must be deemed time to resort to some means which is sure to avoid such misery, and which is sure to promote great happiness. Not only is happiness assured, but a future generation of healthier and more virtuous children than the present; and this is one means of the utmost importance for the improvement of the human race.

4. It saves time and prevents misery in a great number of ways if the knowledge of phrenology is properly applied; and it also will promote happiness and prosperity in numberless ways—as will be seen by perusing the rest of this essay.

5. The servant-girl nuisance could be entirely done away with if mistresses consulted a phrenologist in regard to each girl engaged. The money spent could not be better applied, in fact, it would be a saving. It would save the expense and annoyance of frequent dismissal and advertising. Does she want a girl who will be obedient, respectful, willing, and obliging; a good worker, sober and intelligent, or fond of children? A phrenologist can easily tell whether a domestic servant or nurse possesses these attributes, or whether she is bad-tempered, impudent, saucy, dishonest, careless, or a tatler. Would not mistresses consider it heaven on earth to get just the sort of servant-girls they want? But I must here notice that before phrenology is likely to take its proper place in this respect there will have to be started a Phrenological Servant Agency, in which phrenologists will be able to assure mistresses of certain traits of character in those recommended to them.

6. I must here declare, however, that phrenology would

be just as useful to the servant in choosing a mistress or master. Does a servant of any sort want a certain kind of mistress or master? You will want to know whether your future mistress is good-natured or fidgety, exacting and strict, or easy-going; harsh, and tyrannical, or benevolent-minded. Does she spoil her children, or does she want them brought up orderly and careful, truthful and respectful? Will your master or mistress be stingy, begrudging you your food and wages, or will they like to see you thriving and happy? Ask a phrenologist; he will assuredly tell you the truth, and you will be delighted with your choice.

7. To consult phrenology will not only save a world of misery in regard to domestic service, but in every trade it ought to be consulted, like a talisman. I think I might guarantee an establishment success by never engaging any one but who is recommended in this way.

We will suppose a draper, a grocer, or a butcher, wants an assistant. They want a good business hand, one who can sell well, talk well, be polite and obliging, and above all honest and faithful. Do not engage one till you have his phrenological chart in regard to his suitability for your service. What you pay for the information will be refunded to you ten times over in money, and twenty times in comfort and satisfaction.

8. Here is a captain in a seaport wanting men. He does not want a rebellious, disobedient, sneaky lot. If he knows phrenology he can tell the man who will suit him in a twinkling almost; but it would be best always to consult a thoroughly accomplished phrenologist in regard to his head men.

9. Do you want to find a friend true, hearty, reciprocal? or do you want to know if any of your friends would forsake you, or whether they are as they seem? Study this science and you will not fail to know the true from the false.

10. Do you want to know that very important equation—who are suitable companions for your children?—the same science will throw a flood of light on the question.

11. Do you want to know how to correct your children? Phrenology will tell you where they are weak, and how to strengthen them; where they are too powerful, and how to restrain the volcanic eruptions of some of the organs.

12. Teachers should know phrenology thoroughly. It would unfold to them many a mystery; it would save many a flogging, and much fault-finding. The teacher should know whether a child is weak mentally in any subject, and should make allowance, and train it accordingly. He should

know, because he can know, without waiting for the light of experience to teach him, whether a child has talent for each subject taught. Knowing the talents of a child, and knowing his mental weaknesses, the teacher ought to be able to play upon him like a musician on a piano.

I think I ought to say here it would benefit the phrenological profession immensely, and make people seek after advice more, if a greater number of people really talented were rescued from obscurity by it. Do not be afraid to advise any person, with extraordinary talent for any profession, without seeking a fee from them, and it would redound to the honour of the profession, and make people believe that it is a gloriously true science and no fancy.

13. Put a phrenological commander over a regiment of soldiers—he will know which men to put into the band, which to set over the commissariat department, who ought to lead, and who ought to follow. He would be popular, and win the confidence of the men, because he understood them—their powers and deficiencies.

14. It will help the statesman to choose the right man for the right place; it will help him also in knowing who to depend on as a friend, who to fear as an enemy. It will show him the weak points in an adversary—how to attack him, or attach him, or even detach him. A statesman should learn both physiognomy and phrenology, and it would prove of immense service to him.

15. Would it not also prove of great service to the commander in the field, or the naval captain? He would judge what the strong points of an adversary might be, and what he would be liable to overlook. It would tell him also his own weak points, and what he would naturally be too much inclined to rely upon and emphasize. Not only would it help these, but it would help all to know how to treat an adversary—whether to give in to, or conquer, him, to treat him kindly or firmly, with a rough hand or politely.

16. It would prove of inestimable benefit to travellers and missionaries. Through the medium of this science they could tell at a glance who are savage and who are naturally timid; who are given to thieving and lying, and who are honest; with whom their lives would be safe, and who would care as little about killing them as they would about killing a rat. Missionaries would find it useful in understanding the character of the people whom they would wish to benefit. They would understand which moral organ they could begin with, or which organ of the brain they could act upon best to lead them to a better life. They would understand best how to

overcome their prejudices, their proclivities, and doubts. To the traveller and the missionary I can consider nothing of more importance, and much more than I have said could be written on this head. It would be similarly useful to ministers of religion in all denominations.

17. But not only the missionary and traveller, but every man, woman, and child, might learn lessons of great utility from phrenology and physiognomy in the treatment and understanding of animals. I must confess myself to be deeply indebted to these sciences in this respect. I never fail to know a savage from a mild-dispositioned dog or cow. To this I attribute many escapes from injury, and even death. I consider that simple lessons placed in school-books would be of untold value; and if children found these to be true when tested, they would come to believe in the more abstruse problems which concern the organs of the human brain with greater readiness.

18. I think myself that no money could be better spent by Government than money spent in the delineating the character of every person in the nation; warning every one of the faults to which they are liable, and telling them to what heights they might aspire. I hope this may come to be the case yet. I firmly believe that the nation, or family, or merchant, who will use phrenology most, and truly, will thrive the best. The merchant who uses it goes on a sure basis; he has not to spend years in finding an honest and trustworthy man, and months and years in anxiously looking after him. It would be better than vaccination to a nation, though its benefits are great. It would help wonderfully to empty the public-houses and prisons, and to reform the drunkards, criminals, and harlots.

19. If a man knew in time that he would be liable to become a drunkard if he assayed to drink a little, he might stop in time, or never begin the bad habit. So if a man knew he could scarcely resist the temptation to steal, and other people knew this as well, he would most probably not be allowed to be tempted. So with other sins and weaknesses. When a person knows what sins he would be liable to fall into, he would know which citadel to guard most strictly.

20. What militates against phrenology, or its being used in all the relations of life, is this—that people do not believe it to be true. I believe in its truth so firmly that I have offered to tell the characters of people whom I have never seen before without making a single mistake, and for every mistake to pay a shilling, and have done so, and have never

yet been called upon to pay one shilling, though yet only an amateur, and only a lover of it for its *truthfulness*.

21. Supposing a banker, or tradesman, wants to know whom to trust and whom not to trust, with either goods or money, that banker or tradesman would be bound to be more successful than other men in avoiding losses and pocketing profits. Even if phrenology were not wholly depended on, it would be a material help, and another guarantee, either way.

22. It would help the customer also to know of whom to buy, whether the vendor were plain spoken or mean, honest or tricky.

23. It would tell the shopman how to deal with customers, to know how to please them, what goods they would be most likely to buy, and save a world of trouble and time in showing different things and materials.

24. As a study there could be nothing better for the cultivation of the intellect. It leads to accurate observation and thought. It deals out problems of the most varying kind, from the simplest to the most complex. It draws attention to the whole man, and all his talents, to not only make him a cultivated being, but to make him happy. The right use of one organ of the brain causes enjoyment, and the more organs that are used the greater the pleasure. Phrenology teaches this and the reason why. It therefore will teach a person how to get the most pleasure and happiness out of life; how and in what to gain the most success; how to avoid blunders and unhappiness, and to become as nearly perfect as human nature can. In this it is akin to religion, and one of its handmaids. I have never known a phrenologist who was not truly religious; and of this I am sure, that all the greatest modern phrenologists, in their writings, put religion in the front rank, and in the highest place. We know that God was orderly when He made the brain, just as much so as when He made the body. The feet, the hands, the eyes, the nose, and all the organs of the body are similarly situated in every person, and the organs of the brain are also, except when people are deformed. We know that God was wise when He covered that tender and most important part of man—the brain—with a strong, bony covering, and placed it, where it really ought to be, as the head of the highest part of His highest creation upon this earth.

BE assured that no good can come of your work but as it rises simply out of your own true natures and the necessities of the time around you.—*J. Ruskin.*

DARWIN AND DARWINISM.

THE unveiling of the Darwin Statue at the British Museum the other day was an interesting event, if for no other reason than the opportunity it afforded for the followers of the great naturalist once more to formulate the faith with which they are possessed. Three years have now elapsed since he was laid in Westminster Abbey. He had lived long enough to see the acrimony which a quarter of a century ago was lavished on him, and his discoveries vanish into a sort of kindly protest on the part of even his least pliable opponents. On the other hand, it was the happy fate of Mr. Darwin to gather round him, long before his death, an ever-increasing band of disciples, in the opinion of whom the theory of "Natural Selection" was as much "proved" as that "Struggle for Existence," and "Survival of the Fittest," which were its inalienable corollaries. Indeed, to such violent ends did these extreme advocates of some of his more tentative views force the theory, that the Master was sometimes constrained to doubt whether, after all, he was himself quite a Darwinian. But his contemporaries substantially anticipated for him the verdict of posterity, and when the man who, twenty-three years earlier, was accused of sapping the foundations of revealed religion, finished his illustrious career, the Churchman vied with the *savant* in claiming for him a place in the great Abbey. And Mr. Darwin's reputation was quite as great abroad as it was at home. The Prince of Wales pointed out, in accepting the Statue on behalf of his fellow Trustees, that the memorial at the Museum was subscribed for by so many Continental admirers that it may fittingly be called cosmopolitan. "Darwinismus," as the Germans call it, is now a separate branch of bibliography, with a literature which is becoming rather too voluminous for the young collector, while a regular monthly magazine is devoted to contributions in connection with the subject. The "Struggle for Existence," the "Survival of the Fittest," and "Natural Selection," have been applied to other departments of intellectual life than that which originally gave birth to these phrases. From the "Origin of Species" sprang, as Professor Huxley claimed with justice, a great renewal, "a true *instauratio magna*, of the zoological and botanical sciences." This impulse has rapidly spread beyond the ordinarily recognised limits of biology. Psychology, ethics, cosmology were stirred to their foundations by Mr. Darwin's masterpiece.

The theory has given a new word to the vocabulary; and

so extensively have Mr. Darwin's observations and deductions been quoted, reviewed, popularised, and discussed, that it is now scarcely more necessary for anyone, except the professed naturalist, to read his original works, than it is for the amateur astronomer to consult the "Principia." But the secret of Mr. Darwin's popularity and the prospect of his permanent fame lie, we fancy, not so much in the mere theory, or hypothesis, with which his name is associated, as in the broader philosophical impetus which he gave to the study of Nature. Linnæus, by arranging all created beings in more or less artificial orders, families, and genera, enabled the men of his day to at once take stock of the existing state of knowledge, and to fit into the "Systema Naturæ" all future acquisitions of the same description. Cuvier, by directing attention to internal structure, founded the science of comparative anatomy, and by so doing enabled us to immensely enlarge the area of our vision. Still, the naturalists proper were separated from the anatomists, and even after Jussieu had taught a sounder classification than that of the great Swede, botanical organography and physiology progressed on different lines. The systematist still continued to heap up his stacks of hay in the shape of herbarium specimens, and the zoologist to pin out his insects and label his shells. Meantime, the field naturalist was intent on recording the habits and history of animals; the fancier, the curious traits which they exhibit in domestication; the gardener, the "sports" produced in the course of his horticultural labours; while the geologist filled drawer after drawer with fossils, without seeing in them any other relation to living beings than that the one, like the other, was a "separate creation." So long had these pre-Darwinian toils been going on, that students were beginning to despair of ever mastering a tithe of the seemingly unconnected facts which were ready to their hands. For ages the hodmen of science had been dumping down bricks and mortar, without an architect appearing to fashion the materials into an edifice, and anything like systematic science bid fair to be lost in a chaotic collection of scientific facts. In a moment, all was changed, when the "Origin of Species" appeared in 1859. The outlines of it had been laid before the Linnean Society at a somewhat earlier date, and one or two of the author's friends were aware that both he and Mr. Wallace had arrived at conclusions which were soon to raise so great a stir in the world. But the majority of naturalists only knew Mr. Darwin as a Kentish squire, who had made himself a man of mark by his brilliant researches during a voyage round the world

as the discoverer of the true nature of coral reefs, and as a monographer of the most unwearied care.

The "Origin of Species" showed that the entire literature of agriculture and horticulture had been ransacked. The lore of horse, dog, fowl, and pigeon-breeding had been mastered, and scarcely a review or a book in the vast bibliography of natural history had been left unopened, in order to glean materials for his great work. The theory was, no doubt, a startling one. Lamarck, and the "Vestiges of Creation," had, indeed, prepared the expert for a good deal more than mere evolution, while something of the doctrine of the "Survival of the Fittest" in the endless "Struggle for Existence" seems to have been foreshadowed by writers far more ancient; but now, for the first time, every little isolated fact was found to be dovetailed with others at one time considered equally apart from it and from one another, while a thousand phenomena hitherto inexplicable became at once plain as the noon-day sun. At worst, Darwinism was a "good working hypothesis," and was accepted as such by many who in no way bound themselves to its acceptance in detail. This, indeed, is its present standpoint. Its main truths are generally accepted, but only very rash, very ignorant, or very young men will venture on asserting that its doctrines will a century or fewer years hence be what they are at present. "Science," to use the words of Professor Huxley, "commits suicide when it adopts a creed." Already, indeed, the theory is becoming the battle-ground of rival schools of Darwinians, and is found to be so elastic that the holders of almost any doctrine except that of separate creations may range themselves amongst its adherents. The ranks both of the evolutionists and of the Darwinians embrace believers in monoism and dualism, materialism and idealism, in the eternity of creation, and in the finite origination of the world; in atheism, in primordial creation, in "creative causation," in the eternity of matter and the "finite origination of matter," in the derivation of man, and in the separate origin of man. But as for Darwin, his fame can never be much less. Had he died before the publication of his "Origin of Species," his earlier labours would have entitled him to a place in the first rank of naturalists, and even now, were the "theory" shown to be entirely erroneous, were it replaced by a sounder, and truer, and more convincing explanation of the secrets of life, the endless facts with which it is illustrated would for ever remain a monument of his genius and sagacity. He taught the world to regard the simplest flower, or the most familiar circumstance, in a new light. A primrose and

an earth-worm were, after he had thrown the light of his research over them, something very different from what they were before. Indeed, if a fault could be found with Mr. Darwin's influence, it is that some of the younger naturalists are beginning to be too eager to apply their data without being quite sure that they have the data to apply. This mischief will, however, right itself. A monument more enduring than that uncovered yesterday has been erected by Darwin himself. In truth, no memento of stone or bronze is required to keep alive the name of the man who will rank in all ages with Aristotle and Harvey, and Cuvier and Linnæus, who was greater than Lyell, and Lamarck, and Agassiz: who, as Mr. Wallace has declared, was as patient in observation as Tycho Brahe, as apt in the determination of laws as Kepler, and as inspirational in his genius as Newton.

PHYSIOLOGY IN ITS MORE PUBLIC RELATIONS.

BY NATHAN ALLEN, M.D.

THE study and application of physiology in its relations to public health and human welfare are of modern origin. It is only about half a century since inquiries in this direction attracted much of attention, and within twenty or thirty years most surprising advances have been made in this field. As far as practical applications on a large scale are concerned, physiology is yet in its infancy. A distinguished teacher of the science, after enumerating what it has done, declares that "richer harvests awaits its votaries," and that "it is destined to attain proportions much more gigantic than it now presents." This language to some may seem too strong, but we believe its truth will, in process of time, be abundantly verified.

We believe it may be safely asserted, that by no other science or branch of knowledge can so much good be accomplished for mankind as by the principles of physiology. They may be made to apply to every human being now living, or who shall hereafter exist. Further, we would add, after more than forty years of careful study and observation, we believe there are laws here involved which, when developed and applied, will surpass, in extent of influence and amount of usefulness, any discovery or invention which has ever been brought to public notice. And in no other field of research are the attractions, in our opinion, so inviting, or where the results would be followed by richer rewards. It is the duty

and privilege of the medical profession to enter into and cultivate this field, "which is already white for the harvest."

The field is so large, and these relations are so complicated one with another, that we propose to confine our remarks to four distinct heads, viz. : 1. *Public Health*. 2. *Physical Culture*. 3. *The Family Institution*. 4. *True Civilization*. All that we can do in the present paper is simply to glance at these topics, or make a few suggestions from different points of view. A volume upon each head would be very far from exhausting the subject.

1. *Public Health*.—It is not fifty years since the first systematic and vigorous efforts were made for the promotion of public health. They started in Great Britain, connected with the establishment of the Registrar-General's office, from which annual reports of births, marriages, and deaths were issued. These reports furnished the material for a better classification of diseases, and made known the rates of mortality in different places. This led to a more thorough inquiry as to the causes of disease, and what made the difference in the death-rate between one locality and another. As one of the results, the fact was very soon established, that there was a large class of diseases which, in a great measure, could, by proper means, be prevented.

It was found that this class—called the zymotic diseases—occasioned about one-fifth of the mortality. It was also found from an imperfect application of sanitary science in certain places, that more than half of this mortality was prevented. We learn from Mr. Edwin Chadwick, the highest living authority on "vital statistics," these facts: From 1840 to 1870 the death-rate of England and Wales remained almost stationary, but from 1871 to 1880 it fell off four and one-half per cent. during these ten years, and there were no causes to account for it, except the application of sanitary science. He estimated that 250,000 persons during these ten years were saved from death, who otherwise would have died, had the death-rate of previous years been continued. If twelve cases of serious but non-fatal illness be reckoned for every death, it follows that 3,000,000 persons have in the same time been rescued from a sick-bed. While the amount of suffering, care, and anxiety can not be expressed in language, the material value saved from the expenses of sickness and funerals, as well as from lost time and labour, would amount to many millions of pounds. The benefits of sanitary science are strikingly illustrated in localities where its principles have been faithfully applied. In towns and cities in which the death-rate had been for a long time 25 to 27 in a thousand, it

has been reduced to 17, 18, and 19 in a thousand. One fact is well established, that by a faithful application of sanitary agencies, sickness and mortality can be reduced from one-fourth to one-third. But this great saving of health and life has not been accomplished without immense work. The medical profession has taken the lead in it. Parliament has always encouraged it by numerous acts and liberal appropriations. In fact, this great reform has become a part of government machinery. Many years since, the whole kingdom was divided out into some fifteen hundred sanitary districts, and an inspector appointed to each, who is obliged to make the government an annual report. The press and public opinion have been strongly committed in favour of this reform. Books, journals, and newspapers are filled with instructive reading on the subject. No one questions its vast importance.

Why should there be so much greater interest and improvement in sanitary matters in Great Britain than in the United States? Judging from its past history and present state here, it will take fifteen or twenty years to reach in the United States the same advanced state of the science that is now found in England. It may be said that a monarchical government has advantages over a republican in appointing and retaining the most competent men in office, so that reform and improvements can be better and more permanently carried on. There might be some truth in this if our national state and municipal authorities were waked up enough to provide for and make such appointments.

As a matter of fact there is a most surprising apathy, or want of appreciation of the blessings of health and value of life, on the part of nearly all persons holding governmental positions in this country. In some discussions on this subject in our national congress within a few years, we have had strong demonstrations of this fact. The same thing has been exhibited, in almost every state, in the indifference or opposition to the formation of boards of health.

It is true we have a National Health Association, and a large number of state and municipal boards of health, but the work is carried on mainly by a few individuals, and most of it is volunteer work, performed at the expense of individuals. The appropriations on the part of states and cities for health purposes are meagre, especially when compared with the great interests involved. If a careful inquiry was made as to how many laymen holding official positions, or occupying prominent places in society, were intelligently interested in this reform, the number would not be very large. Let the

inquiry also be made as to what proportion of the medical profession were personally and heartily engaged in this reform, and we believe the proportion would be found small. It is true that in some localities great improvements have been made in sanitary matters, but the work has been performed by a few individuals. If the great body of the profession were heartily interested in sanitary science, and were ready to advocate the reform at all times and under all circumstances, the community would become better enlightened upon the subject. This reform would soon find favour in government boards and legislative bodies, and liberal appropriations would be made to carry on the work.

One of the tests of the interest in, or appreciation of, a work, is the amount of sacrifice or contribution which is made in its behalf. Now, is it not a fact, that nearly all government authorities, having the vital welfare of the people committed to their charge, treat the subject of health almost with indifference, or appropriate as little money as possible to advance its interests? On the other hand, how few physicians stand ready to make sacrifices in this cause! It should be borne in mind, that it is a double sacrifice on their part—it takes away their business. The primary object of the medical profession has always been to cure disease, but not to prevent it. To do this requires a high plane of motive and action—higher than it can reasonably be expected a majority of the profession will adopt. The success of this reform depends upon the joint action of the medical profession and the community at large. No question has ever come before the public so important in all its bearings, involving to a large extent the health and lives of the people, as this question of sanitary science.

2. *Physical Culture*.—This, in one sense, is sanitary science applied directly and specifically for improving the different parts of the body. This is composed of tissues, which by the law of exercise and nutrition can be materially changed, especially in early life. No human being was ever born into the world with a perfect body. Generally there are some parts too weak and others too strong, or, in other words, there is a want of harmony and balance.

There is such a thing as a normal standard of physiology throughout every organ in the body, but this perfect standard is never found, only approximates toward it, and the nearer it is approached the more valuable the organism. There is no question but one form or kind of organization is better than another; and if so, there is a form or standard better than all others. What is that form or standard, then, so

desirable? We maintain that it is this normal standard, where all the organs are perfect in structure, and each performs its own legitimate functions. In all our discussions on this subject, it is highly important that this normal standard should be kept constantly before the mind.

In the making up of all parts of the body, there is a point of very great importance which is not taken into account as it ought to be—that is, *harmony* or *balance*. If all the organs are evenly balanced, and each performs its own functions without disturbing the others, it will be seen at once that such an individual will have better health, greater power of endurance, and longer life will follow. In some respects the human body may be compared to a complicated machine, made up of many parts. Now, the more thoroughly constructed is such a machine, and the greater the harmony in all its operations, where the “wear and tear” will come properly upon all the parts, the less likely will that machine be to get out of order or need repairs, and it will be easily kept in good working order. It is so with the human body. Keeping in mind what constitutes a normal standard of physiology, and the importance of harmony or balance in organization, the weak or defective parts in every individual’s constitution can be found out. Thus, by means of this knowledge, the weak parts can be strengthened so as to improve health and prolong life.

As the most favourable time for improving physical organization is in early life, it is important to direct attention to that period. With the increase of wealth and the powerful influence of fashion, together with the pressing claims of education, there is great danger that the vital interests of the body will be sacrificed. In this state of things it becomes the duty of physicians to point out the danger and urge more than ever the necessity of physical culture.

Throughout our whole educational system, as now conducted, from the primary school to the university, the leading tendency is to develop the brain and nerve-tissue at the expense of the muscles and other parts of the body. The fact that all mental acquisitions are very dependent upon strength and health, the physical system is too much overlooked. Another fact should be better understood—that no one thing contributes so much to success in any kind of business, or in professional pursuits, as a sound, healthy body. All the experience of the past, and knowledge of the present state of society, confirms the truths of these statements. Notwithstanding this, most educators, in their zeal for mental acquisitions, pay little or no attention to physical development.

In a school-system where children, from five to fifteen years of age, are confined to study most of the time, great pains should be taken that the body is not injured, nor in any way stunted, but that every possible facility be afforded for its healthy growth and development. This caution is more necessary in cities, where the leading tendencies among the young are to a state of physical degeneracy.

In New England all grades of schools are established more extensively than in states at the West or the South. In a few of these schools provision is made for regular and systematic exercises by gymnastics or some other means. Whenever this practice has been continued for any length of time a decided improvement has been found in the physical health and scholarship of the pupils. But only a few school-boards or teachers have availed themselves of this sanitary provision.

Within a few years there has been a great increase of interest in physical culture in some of the colleges, and also in athletic sports outside of institutions. In two of them—Amherst College and Harvard University—the changes have been so great that they demand special notice.

It is almost twenty-five years since Amherst College introduced a regular system of gymnastics, compelling all the students in classes to practise these exercises half-an-hour or more every day. A thoroughly educated physician—Dr. Edward Hitchcock—was placed in charge of this department, who gives also lectures upon physiology and hygiene. These physical exercises are considered as important as lessons in the classics or mathematics, and improvement and deportment here are reckoned in the rank and merit-roll of every student. Since the introduction of these exercises there has been a marked change in the health and the physique of the students. President Seelye recently stated that the health and constitutions of students improved every year—that there was less sickness and leaving of college on account of ill-health than formerly, and, what affords still stronger evidence, the Sophomores have better health than the Freshmen, the Juniors better than the Sophomores, and the Seniors better than the Juniors.

From careful measurements of every part of the body taken of students upon entering college, and again, after four years, upon their leaving, decided changes are found to have taken place for the better in the growth and development of the body.

The physical training at Harvard is different from that at Amherst. It is not compulsory, but voluntary; it is not carried on by classes, nor at set hours. While a large number

of students exercise in the gymnasium, they do it at their own convenience, and engage in such exercises as they think will do them the most good. A highly-educated physician—Dr. D. A. Sargent—has charge of the gymnasium, and makes a speciality of advising what particular kind of exercise is best adapted to improve the health and strength of individual cases. Thus, if among the students entering the University some are found suffering from certain physical weakness or defects, they are placed under his training, and in process of time are greatly benefited. Within a few years there has been a great increase of interest as well as improvement at Harvard in sanitary matters, to which the new gymnasium and its superintendent have very much contributed. In a recent address before the alumni, President Eliot stated that the more he saw of the men graduating from the University, who had gained distinction in life, or eminence in the learned professions, the more he was convinced that the basis of their success depended much upon the vigour of the body and a sound constitution.

3. *The Family Institution.*—The relations of physiology to the family are fundamental, and of the very highest importance. Unfortunately the subject has generally been discussed with reference to one single point, *the sex relation*, and that mainly upon too low a plane. Though this relation stands out prominent and foremost, there are others incidental and more remotely connected with it of vast importance. The very foundation, the primary object of the family, the propagation of the race, constitutes a part and parcel of physiology.

The principles of this science, we believe, ought to be brought to bear more than they ever have been in the guidance and management of this institution. It has been stated, that this science is in its infancy as far as some practical relations are concerned. At the late meeting of the British Medical Association, Dr. P. Redfern, Professor of Physiology in Queen's College, Belfast, in a lecture, after noticing the discoveries and great progress made in this science within fifty years, says, "All we now know may appear very insignificant in the estimation of our successors of the next generation."

May it not be that there are here some new discoveries or applications of this science to be made to the family, which will have a powerful influence upon the character and permanence of the institution? May there not be certain physiological laws, virtually new discoveries, which will place the family relations in a new light, and which should surely be understood? We venture to make some suggestions on

the subject, which would indicate that there were here laws of the greatest magnitude.

It is almost one hundred years since Malthus discovered what he supposed certain principles that regulated population, or human increase. His theory was based upon objects or causes external to the body, as though physiology had little or nothing to do with it. Malthus' views had great influence for half a century or more, but for many years they had been discarded by medical and other writers of the highest authority. There must be in *the nature of things* a great general law of propagation, and that, too, must have its basis in physiology. May it not consist in the perfection of structure and function, or in the normal standard which anatomy and physiology have established?

Though this perfect standard is not found in nature—only approximations to it—still it may constitute the true law of propagation, and it may be followed with all manner of deviations. Here comes in another subject of great importance, viz.: heredity or inheritance. Facts innumerable of every description and character have been collected, which demonstrate a most intimate relation between the parent and child, between one generation and another, but these facts can never be classified, or satisfactorily explained, without some general law of propagation. Neither can they be utilised to much advantage.

These two fundamental principles, though one is a sequence of the other, are really the most important laws in the universe. It could not have been the intention of the Almighty that His creatures should always remain ignorant of these laws. While man was created a free agent and placed in a probationary state, he should certainly understand the laws that govern his own being and destiny. It will be seen at once that the two laws alluded to enter largely into the family, showing the relation which physiology sustains to this institution; but there is another view of great importance which we will present in as few words as possible.

The origin and foundation of the family have always been treated as based alone upon Scripture authority. Thus the commands and instructions pertaining to the family, as well as the blessings attending this relation, are all taken from the Scriptures. But we believe their counterparts are found in Nature, or in the physiology of man; and, when this science is fully and correctly understood, that the necessity of such an institution can be proved from this source independently of Revelation. As in natural history, in astronomy, in geology, and other natural sciences, so in physiology, Nature and Revelation, when correctly interpreted, must agree.

What are the teachings of Revelation in regard to the objects of the family? What are the teachings of all Christian denominations, Protestant and Catholic? These may all be summed up under three heads: 1. The continuance of the race; 2. Preservation of chastity; and 3. Mutual help and company. It may be proved under the first head, we believe, that the race cannot be continued in its best estate for generations without the monogamic family, and that the three objects here named can be secured only by a strict observance of physiological laws.

The perpetuation and permanence of the family must depend very much upon the extent to which these several objects are secured. If there is a failure in any one of these, it weakens the family just so much.

Such is the status of the family at the present day, that it needs all the lights and supports which it can possibly obtain.

In some parts of the country the marriage-rate is steadily declining, and divorces are multiplying. There are other causes at work that threaten the stability and even existence of this institution. When the functions of all parts of the body, especially those of the brain, are better understood, it will be found, we believe, that there are certain relations, strictly physiological, which have a far more powerful influence upon the domestic and family interests than have hitherto been considered.

Why should it not be so? The family is the most important institution in the world. The exact and complete relations of physiology to it have never, we believe, been truly discovered or applied. If there is a great general law of propagation, and as a sequence a general law of inheritance, when these laws are correctly understood they will shed a flood of light upon the family. The field of inquiry is new, but this fact affords no reason or argument that it is not true. The discovery of new truths here is no stranger than many other discoveries that have been made. Here is a work for the medical profession, the importance and magnitude of which cannot be expressed in language. What work could exalt more the labourer, or yield a richer harvest in all coming time?

4. *True Civilization.*—The first impression might lead one to suppose that such a subject as civilization would have little or no connection with the human system. But upon a careful investigation, it will be found that the vital forces and the laws that govern the body sustain most intimate relation to true civilization. The very term *civilize* means to reclaim man from a savage state, to teach him the arts and all kinds

of useful knowledge, to refine his manners, improve his habits, and secure for him the greatest possible amount of comfort and happiness.

Now, the most important agent and object in all these changes is man himself. His nature or the laws that govern every part of his body must be more or less affected by these changes. Whatever goes to make up civilization, or whatever changes are brought about by it, these should harmonize with the nature of man. There can be no permanent or true civilization unless it is adapted to develop the whole nature of man. After a most careful analysis of all the elements of civilization—what it has been in the past, what it is at the present day, and what it should be—we shall find that its true foundation must be based upon the nature of man in developing his physical, mental, and moral nature, each in harmony with the other, and all to their highest extent. This grand idea or plan has, we believe, never been attempted, much less accomplished.

The Greeks and Romans made advances in this direction, in developing the body and cultivating the mind, but failed in the moral element. We have at the present day certain types of civilization which would be considered by some superior to any in the past, and by others, not easy hereafter to be surpassed. But before we can determine what is true civilization, or before there can be a general agreement upon it, we must have some standard by which it can be tested. This must be the highest possible development of man's whole nature, the animal and intellectual obeying the moral and religious. Then true merit and real worth would receive its just reward.

Every organ in the body is governed by its own law, and all parts of the system sustain certain relations to other parts as well as to external objects. As the brain is the crowning organ in the body, it is of the highest importance that all its functions should be properly and harmoniously exercised, and that to the fullest extent of which they are capable in a normal state. Such a development would constitute a normal state of physiology, and the central point toward which all civilization should be directed.

Until some such state of society is brought about, there can be no true or permanent civilization. Its type must be artificial, and to a great extent unnatural and unhealthy. As long as it rests upon such supports, it must be unsatisfying and constantly changing. It partakes very much of this character at the present day. A distinguished writer, in characterizing it, maintains that wealth, fashion, and show

are its principal supports. This criticism might at first seem severe and unjust, but after all there is too much truth in it. One thing is certain—there is no general standard or agreement, and it would be difficult to decide in what direction progress is leading us.

The fact is, that in all the discussions on this subject, scarcely any reference is ever made to the body. The most voluminous writer on civilization, Guizot, speaks of the domestic affections, the intellectual powers, and the moral forces, but never discusses the relation which these classes sustain one to the other, or whether they have any connection with the body or the brain, or whether there can be any change in the physical system, or whether the organization of individuals or races makes any difference.

Almost the only writer who has attempted to apply physiological principles to illustrate changes in history and state of society, is the late Dr. John W. Draper of New York. His work, "History of the Intellectual Development of Europe," is not only a monument of thought and research, but an honour to the medical profession. Says Dr. Draper: "Social advancement is as completely under the control of natural law as is bodily growth. The life of an individual is the miniature of the life of a nation." What we want is a practical application of these two propositions to the present state of society.

But this paper, already extended beyond its original design, must be brought to a close. If the positions taken are correct, it will be seen that a most important field is here laid open to the profession for study and research. The field is large—it embraces the whole human family, and is ripe for the harvest. It appeals emphatically to the members of this profession, as the body is peculiarly entrusted to their care and treatment.

It may be thought by some that the suggestions in the latter part of this paper are visionary and unworthy of thoughtful consideration, but such will not be the verdict of posterity. In reviewing the history of physiology, who will assert that there can be no new discoveries in this science, or new application of its principles? What is the testimony of its teachers and professors—the highest living authority on the subject? Is it not that richer rewards await the votaries of this science—that the human family are to reap here golden harvests? History teaches that the great truths of Nature are slowly brought to light at different periods and by a variety of agencies.

GEORGE AUGUSTUS SALA.

THIS gentleman is middle-aged, is about medium height, and of somewhat rounded form, though neither fat nor heavy. He carries a small paunch, and his bones and muscles are not prominently marked.

He may be called a round man, for all the lines of his structure are curve lines; no point appears to present an angle. In this he is just the reverse of the great writer, Thomas Carlyle, who bristled with points and angles. Those who observe structure in connection with mind, and also with the kind of work produced by various minds, will find a serious study here. They will see that the angular and rugged Scotchman bristled up and ran foul of all kinds of abuses, and made a name for himself by scolding John Bull, and expressing himself in the roughest and most peculiar prose. They will also see that the Curvilinear Sala has glided into all sorts of positions, has easily adapted himself to all kinds of men in circumstances innumerable, has observed quickly and broadly, and with facile pen expressed himself freely and smoothly, with glib running phrases that read pleasantly, and cause knowledge to slip into the minds of his numerous readers.

One of these may be called the Man of Substantives, the other the Man of Adjectives. One strikes with the hammer of Thor, driving home his hard angular facts with every point sticking out sharply; the other pads his facts with various waddings, coats it with velvety adjectives, and rolls it into sight. One gives his dose of medicine with all its bitter pungency of flavour perceptible outside; the other sugar-coats his pills. One is the philosopher and the man of all time; the other the man of the world and of this time only.

Students of human science know that forms of body, of face, and of brain harmonize. They know that a knuckly, angular, knobby hand is attached to a body having prominences in knees, elbows, ankles, and just wherever they can be stuck on; and goes with a face bony and hard about cheeks, eyebrows, nose, and jaws; and that the head which crowns this whole organization is roughly hewn like the other parts. They know, too, that the mind which has built up and which animates that structure, is more likely to manifest itself in hard work and positive utterances than in suavity and polished phrases.

When these students look at the head and form of this apt writer and speaker, this highly cultivated and finished speci-

men of European civilization, G. A. Sala, they will be struck with its harmony and roundness. When they get his face in full light, and watch its play, they will see how wonderfully flexible and expressive it is ; how, like that of a Toole or a Matthews, it seems capable of expressing the gamut of human passion without uttering a word. With these things before them, they will begin to understand this phenomenal man, and will see reasons for his success—his, perhaps, unparalleled success—as an English journalist. A much greater man might never have got a hearing ; a much more acute observer might never have got for himself a chance of seeing ; this man of happy development, of nice easy working mental faculties, this body and mind that presents no angles and does the maximum amount of work with the minimum of friction—either of faculty on faculty internally, or of angles upon surfaces externally—seizes on his opportunity, takes fortune at her flood-tide, and getting the ear of the reading public of England, and a position on the staff of a great English newspaper, floats on and paddles on into fame and power.

Probably what he was as a youth had something to do with what he became ; and what he has been and done has re-acted upon him and shaped him—as what we are, and what we feel, and think, and do, shapes all of us. What then ? Just this, G. A. Sala presents in his form of body, of face, of head ; in his roundness, harmony, facial and mental flexibility ; in his prose poetry of flowing adjectival phraseology, a picture of the vital mental temperament and its production ; while Thomas Carlyle, with angular form and cliff-like brow, presents one of the motive-mental temperament and its results. One worked, and thought, and wrote ; the other sees, and talks, and writes. Carlyle is only mentioned here as a contrast and a foil to help to explain Sala, the phenomenal journalist. We must not insult the memory of the Apostle of Labour by ranking him with any creature of a day. One is a still tarn locked in Scottish mountains, deep and silent ; the other is a mirror. One a mountain stream rushing and gurgling amongst rocks and boulders, and anon settling in deep pools ; the other a babbling brook that ripples on, telling all it knows, and perhaps more. Never mind, we do not despise books ; all waters empty into the same ocean, and all lives have some use, though here and there the use is hard to find.

Let us get back to the versatile Sala.

If all men had such variety of ability as this man, there would scarce be room for them on this little planet. He could be actor, dramatist, novelist, diplomatist, and linguist, just

about as well as storyteller and journalist. His mother must have been beyond the ordinary run of people. Still, in spite of all his talents, he has faults. Some are basic and hereditary, others have been acquired in part, and in part have sprung out of his circumstances. Amongst the first may be ranked an excess of self-esteem and love of display. Ambition and self-confidence have united in him, and between them produced a sublime egotism. He is remarkably clever—true; and he knows it remarkably well. Even these faculties have had their use in him, and have also a use for those who study him. Their proper use has given him an almost boundless ambition, a cool self-reliance, and a species of polite cheekiness that has helped him through scores of difficulties and many actual dangers. Few men will be better able to give the snub polite than he; and fewer still so easily adapt themselves to the ways and manners of men of all ranks. His coolness, imitation, suavity, will enable him to associate with prince or peasant on such terms that neither shall suspect him of being other than one of themselves. Most thoroughly he is all things to all men. The danger to such men is that of having their principles so trimmed of all angles and roughness, that they cease to be obtrusive, and perhaps, by-and-by, become so slippery that they drop and get lost. Not that they have done so here; a man without principles could not fulfil engagements and do work fairly and honestly. We colonials may expect fair treatment from G. A. Sala, and he will certainly find that we use him well. When he writes his book he will speak as he finds, and he definitely promises to “prowl around” on his own account, and find out the actual state of things regarding the colonies and colonials. He will see more life than he sees from the platform. His danger is lack of sharpness of principle in little matters; in dining out too often; in being too social in order to “get at” people, and in other matters of detail. There is another danger. He lacks tough fibrousness of structure, and his life has of necessity been a very trying one. He may collapse if he “rests” too much in addressing audiences such as Melbourne ones, and in halls such as our Town Hall. These hints show plainly enough the direction in which his faults, both original and acquired, may be sought for. To state them more plainly would not be kind. He is the only Sala; he is here as our guest; from him, and even from his faults, we may learn that a man sets his own rate, and that, given talent, a little dash of egotism may help a man to show the light that is in him. Egotism may lead a man to climb and put his light high up so that it can be seen

from far. We may, as writers for the press at any rate, forgive a little egotism and many other faults in the only Sala, now that he has taught the world that knights of the quill are men, and fit, when ability is in them, to rank with leaders of men.

JOSEPH FRASER.

(*In the "Melbourne Herald."*)

THE HYDEBOROUGH MYSTERY.

A TALE OF A GREAT CRIME.

BY CAVE NORTH.

CHAPTER XXI.

MARTHA.

When Fangast learned that, indirectly, his plot had been the cause of Pennyfold's arrest for murder, what so natural as that he should at once hasten to his friend Rice. It has already been said that he had no other desire in throwing suspicion on the young chemist than to raise an insuperable barrier betwixt him and Letitia; and that end having been attained, he would gladly have had matters stop there; chiefly, it must be confessed, because he was afraid that investigation might reveal the disgraceful snare he had laid against Pennyfold's happiness and good name. He had no wish to hurt the young man further than was necessary for his present satisfaction; indeed, he had humane feeling enough to be anxious to stop further persecution. But he was not prepared to end Pennyfold's troubles by betraying himself, and so wished Rice's assistance.

To his annoyance, he found the detective away from home. The auctioneer was one of those who, when anything vexes them, wish to transfer the trouble to some one else; and who, if they cannot succeed in their amiable intention, suffer not so much from the vexation itself as from the annoyance of being unable to inflict it upon some one else. He thought Rice would be able to devise a way to prevent Drupe from suffering for a crime of which he was innocent without exposing the dastardly act by which suspicion had first been fastened upon him. He feared that, if the affair went to trial, the innocence of the accused would be so fully established, that the good which had been effected by his little plot would be more than counterbalanced by the improved light in which Drupe would stand to his cousin.

How mean Fangast began to feel—not so much because he had committed such a despicable act, but because of the probability that he might be found out—it is needless to say. But when he had felt as meanly as he could, he found a little consolation in the reflection that it might be that Pennyfold was really guilty, and that his planting of the gloves was, after all, not so bad if it led to the detection of a crime: perhaps it was providential. Poor Providence! how many of our failures are placed upon thy broad back!

After leaving Rice's lodging—which was on the very outskirts of the town, beyond Cuckoo Hill—Fangast was walking back towards Eastgate when a strange woman accosted him, and asked him if he could tell her where Mr. William Softly resided.

"Mr. William Softly is dead, my good woman," replied Fangast, eyeing her narrowly.

"Dead!" exclaimed the woman. "Since when?"

"Over a year: at least, I should say, he disappeared then, and it is thought he was drowned or murdered."

"Disappeared! Then it is him!" exclaimed the woman.

"Who is he?" asked Fangast eagerly. "To whom do you refer?"

"Show me where his family lives, please sir, if you know; I must see them quickly!"

"I will, but—"

"I suppose his wife is still living, and—and his niece?" continued the woman, without noting his interruption. "That's all there is."

"No, there's a brother."

"A brother! What brother? William Softly never had but one brother, and he's dead!"

"So Mr. William Softly thought; but he turned up very unexpectedly a little while ago, and he is as little likely to die now as at any time these forty years past. Jacob Softly (with a smile) is not one whom the gods usually take young."

"Jacob Softly alive!" cried the woman with a gasp, and turning very pale. "It cannot be!"

"Yes, he's alive and kicking," replied Fangast; "I saw and spoke with him at his home barely an hour ago. But come along, and I will show you the way; it is not many minutes' walk."

"No, no! I can't go there! I can't meet him!" exclaimed the woman.

"What! are you afraid of Jacob Softly? Why, there is not a more harmless man alive. Come!"

"No, young man, I can't meet Jacob Softly. I'll go back to where I came from. Good-night!"

With these words she turned about and hurried down the road, Fangast watching her, half stupefied, until she was out of sight. Then, having somewhat recovered from his surprise, he hastened after her. "I must not let her go away like that," he said to himself; "she is evidently the repository of some secret: what if she should know something about William Softly?"

When he reached Eastgate he found she had disappeared. He ran hither and thither looking for her, but in vain. Finally, he gave up the search, with a muttered curse on his stupidity, and was wending his steps homeward, when he espied a crowd of boys and girlsgathered about the door of a warehouse. He pushed them aside to see what was the matter, and was not a little surprised to see that the object of curiosity was no other than the woman whom he had been pursuing. She was evidently in a swoon. In a trice he had

her conveyed into a neighbouring tavern, where she was presently brought round.

Meanwhile Fangast sat in the bar trying to imagine what could have occasioned such a sudden change in her intentions. He was convinced, for one thing, that she knew something about the missing Mr. Softly. But why she should exhibit such terror of Jacob he was at a loss to imagine. It was no secret that the quondam mountebank's antecedents were not altogether creditable; still, with all his faults, it was not possible to conceive a reason for a child's being afraid of him. Jerome was puzzled; and as, on finding herself better, the woman immediately asked to be directed to the station, as she wanted to get back to Homcaster at once, he thought she was going to escape him again before he could resolve the difficulty. However, an idea struck him. He knew there was no train from Hydeborough for the north until after midnight, but there was one that passed Cutchford at half-past ten. This it was possible to catch by means of a good horse and trap, such as he possessed. He made the offer to drive her, as he had to be in Catchford on the morrow, and it only meant his going to-night instead of in the morning.

The landlady of the tavern, who knew Fangast, assured the woman that she need have no fear about trusting herself to his care, and, in short, the stranger accepted the offer, and in less than half-an-hour they were rattling along the northern road in the direction of Cutchford.

After going some distance in silence, Fangast said—

"I imagine, from the conversation we had when we first met, that you know something about Mr. William Softly?"

The woman sat with a half-fearful, half-sullen look, saying nothing. Fangast proceeded—

"I told you that it is believed here that Mr. Softly was murdered, or, at any rate, put out of the way; but I did not tell you that a young man, a relation of the family, is now in prison on suspicion of being the murderer."

"I don't believe William Softly is any more murdered than you or I am," said the woman sharply.

"It's all very well to say that," replied Fangast, "but his body was found last night in a wood hard by the town, where he had been murdered and buried."

"You don't say!" exclaimed the woman. "Lawks a me! But how can a dead man beg?"

"Dead men are certainly not accustomed to beg," returned Fangast, with a laugh. "Perhaps you have seen his ghost?"

"La! how you do a-frighten one!"

"Why are you so frightened?" asked Fangast.

"Because I'd be sworn a beggar-man I see nearly every day in the place I come from is William Softly—him or his ghost—though I haven't seen him rightly for years, in fact, never since he took Letty."

Her companion's look of astonishment at this revelation made

the woman aware that she had betrayed her secret. Fangast felt her trembling by his side.

Recovering quickly from his surprise, the young man said—

“So you are Letitia’s mother, and Jacob Softly’s wife?”

A pause ensued; then the woman said with an effort—

“Letty’s mother—yes; but Jacob Softly’s wife—no!”

“But,” observed Fangast, pointedly, “Miss Softly calls Jacob her father.”

“And so he is her father, and rightly,” rejoined the woman, adding inquiringly: “You seem to know the family well?”

“I do—very well,” Fangast returned. “But tell me why you have such a repugnance to meeting Jacob? I have heard that he deserted his wife, but—”

“I don’t want to meet Jacob Softly, because it is better that we should not.” Then, after a pause: “I suppose by law I am still Jacob Softly’s wife, though I have married another; but not all his brother’s gold would induce me to live with him again. He deserted me for seven long years, and I thought he was dead—I really did, or nothing would have persuaded me to take another husband; but seeing that I have done, and that he has been a good husband to me, I shall stick to him. So you see no good can come of our meeting.”

“Certainly not,” said Fangast. “But what about Mr. William Softly, whom you say you have seen?”

“Oh, I had quite forgotten him! I don’t know what to think, seeing that you say he has been murdered; but certainly no man could be more like another. I would have sworn against anything it was William Softly.”

“Then you are not sure it is William Softly you have seen?” said Fangast, to whom the prospect of the ex-mayor’s return to life, and to his place in the world, was not altogether agreeable.

“I was as sure as a person might well be until you said he was supposed to have been murdered. He has his look, his figure, his walk and ways; only he looks a little older and thinner, and more haggard-like in the face than when I saw him last.”

“But you had not seen him for a great many years before?”

“No; but a man in that time does not grow out of all likeness of himself. No; I’ll be bound it is William Softly or his double.”

“And you say he was begging?” queried the auctioneer, incredulously.

“Yes; he stands at the end of the old bridge, and though he does not actually ask for alms, he takes what is given him. He stands there in all weathers, just like the old man that has been there ever since anybody remembers; he was picked up dead at his post one morning about a year ago; then suddenly William Softly came, and everybody said how natural and home-like the old bridge looked again. Little I thought when first I heard the matter talked about that it was my own husband’s brother that had come to beggary. When I did see him I was struck with something familiar

in his face ; but it never occurred to me how like it was to William until a month or two ago, when it flashed on me all of a sudden. Even then I thought it could not be him. Still, the old man's face haunted me, and it worried me so, that at last my husband said : ' Martha, you go to Hydeborough and find out about William Softly ; ' and that's how I came to be here."

Presently the travellers arrived at Cutchford, and as there was half-an-hour yet to spare before the train was due, Fangast made the best possible use of the time. He succeeded in thoroughly winning Martha's confidence by telling her that he would not say anything to Jacob about their interview, and while pretending not to believe that the beggar of Homcaster Bridge was William Softly, he arranged with her to visit the town, and see the old man himself.

The fact is that Fangast thoroughly believed, from Martha's description, that the beggar was no other than the lost Mayor of Hydeborough ; but the old man's possible return to his home and friends was fraught with such momentous importance to himself, that for the present he could not decide how to act. Meanwhile, his last words to his newly-found acquaintance, before the train started, were to caution her to say nothing to anybody about what she had seen or what she thought.

CHAPTER XXII.

LETITIA GOES TO HAWTHORNDEN.

THE more Jerome Fangast considered Martha's narrative, the more he saw the importance of his going to Homcaster without delay, and investigating affairs for himself ; accordingly, within forty-eight hours of bidding adieu to Letitia's mother, he found himself on the way to the old town whence Jacob and his brother "hailed."

Meanwhile, Pennyfold Drupe was meditating, not very cheerfully, as may be imagined, in the solitude of his cell. After his interview with his mother and Agnes, his courage had kept up his spirits for some time. This, he thought, was but one of the trials of life ; it might last for a few days or weeks, but eventually everything would be made clear, and he would step forth again to freedom and joy. Letitia loved him, he was sure of that ; and when he was free from suspicion, she would be the first to rejoice and to welcome him back to his old place in the world, and, better still, in her affections ; and then, with her for his constant companion, and his beloved studies, what more could life afford ?

But after awhile, the close atmosphere, the darkness, and the reaction after the day's excitement, brought about the inevitable result. A horrible depression took possession of his mind, and he became a prey to the utmost doubt and distress. Why, he asked himself, should he be lying there under accusation of a horrible crime, of which he was innocent, when others were free to come and go ? Why should his love have been beset with trouble from the very beginning, and be a torture to him now, while other youths and

maidens enjoyed their love-days without let or hindrance? His father had had endless misfortunes, and had died before his time, a broken-hearted man—why? Was Providence sometimes malicious? And his mother? How she had suffered! a cripple for twenty years. But stay!—

The remembrance of how his mother had appeared before him in the magistrate's room now struck him for the first time. He recollected having been surprised by something unusual in her manner and appearance on her entrance, but in the whirl of conflicting emotions had afterwards forgotten it; now it appeared so extraordinary that the thought thereof was overwhelming. Could it be, he asked himself, that the Providence whose ways he had been questioning had performed a miracle upon her? Were they still considered worthy—?

Pennyfold had not yet forgotten how to say his prayers, and while engaged in the act of penitent devotion, that Providence, whose beneficence he had erewhile arraigned, shed over him that benign mantle of sleep that, like the sunshine, falls equally upon just and unjust; and in that position he was found in the morning by his jailer.

Later in the day his mother and Mr. Marshall visited him, and arranged for his defence. When they were gone he became greatly elated in the hope that Letitia would come and see him; then, perceiving the utter wildness of the expectation, he became dejected, and passed several hours of such misery as only disappointed lovers know; finally, with the falling darkness, and the concurrent rising of the stars, a few of which he could see through his prison bars, he grew calmer and more reasonable. He marked the constellations as they rose to view and passed out of sight, and took pleasure in recalling the name of each individual star, until, wearied out with watching the endless procession, he fell asleep and dreamed that a new star appeared beneath the belt of Orion, the name of which he called Letitia.

The next day, when brought before the magistrates, his eye wandered anxiously round the court; but the face he sought for was not there, and his eye fell, after the survey, with visible disappointment; and yet the next minute he was glad she was not present to see him in that disgraceful position. Just as the hearing was about to commence, his mother appeared on the arm of Mr. Marshall. She pressed his hand as she passed him, and murmured with a look of affection, "My boy!"

It brought tears to Pennyfold's eyes, but hers were dry.

The evidence taken before Mr. Turnbull was read over and corrected in one or two particulars, and then the policeman Clodd—the one whom Pennyfold had heard singing in Hockley Wood—gave evidence of the finding of the body, or rather of the skeleton—for it appeared that little or no flesh was left on the bones, and there was hardly any trace of clothing about it. This rapid decay was accounted for by the presence of lime in the earth surrounding the body.

When this stage had been reached, the prosecuting solicitor asked for a further remand, which was granted.

The details of the case, when they appeared in the newspapers, caused a great sensation. It was referred to as "The Solution of the Hydeborough Mystery." One local newspaper, not satisfied with giving the facts as they were brought out in evidence, published an article entitled, "A Career of Crime," in which the supposed murderer and his victim were traced, step by step, from the meeting at the Town Hall to the committal of the dark deed in the dismal wood. The narrative was cleverly written, and so very plausible that it left on the minds of most people who read it, a conviction of the prisoner's guilt, in spite of an occasional qualifying phrase, such as, "It may be supposed," or "We may imagine how," etc., all of which was very unfair to the accused; but then, why should you consider a presumed malefactor and spoil your sensation?

At least two persons, however, failed to be convinced by the article—they were Pennyfold's mother and Letitia. Since the moment that her father had announced Pennyfold's arrest, the young lady had been in a state of great agitation; her whole nature was roused by the imminent peril of one whom she confessed had been so near and so dear to her; she felt something like shame that she should have allowed herself to be moved to cast him off so lightly on the first breath of suspicion falling upon him, and she blushed to think how soon and how easily she had been induced to sanction the advances of his rival, the intimate friend of her father; who almost from the first had made no secret of his dislike of Pennyfold, and who had evinced a satisfaction at his arrest that he made no effort to conceal.

"Poor Pennyfold! they are all against him," she said to herself. Then, in the exasperation of her sudden grief, she asked herself the question: "Could there be any plot against Pennyfold? and if so, could her father be involved in it? When Letitia became calmer, she dismissed the suspicion as unworthy; but ever and anon, when she marked her father's antipathy to the young man, the thought, in spite of herself, would return and torment her.

During the day of the examination, Miss Softly was in a state of the greatest excitement. She watched eagerly for Jacob's return to hear how the case had gone. He came at length, but in such a state from drink that all he could say was that "Young Pills was dead—dead as a door-nail—no man could live against such evidence!" A little later he brought in the paper containing the "Career of Crime," which caused her to express the wish that "men would be fair."

In the evening she, and her ever-present comforter, Maria Goosey, experienced some consolation, for John Henry Gander came and gave them a succinct account of all that had occurred at the police-court down to the minutest shade of evidence, none of which he concluded pointed to Pennyfold Drupe as the murderer of Mr. Softly, supposing him to have been murdered, which he did not

believe ; for as to the corpse or skeleton that had been found, for all that he could see it might be the remains of his great grandfather, or anybody's great grandfather, or their great grandmother for the matter of that.

"John Henry," said Maria, "don't be irreverent."

When the mind is once awakened out of its lethargy it immediately takes in a larger intellectual horizon, and many things that formerly appeared altogether outside its world now become included within it. So it was in Letitia's case ; and one effect this sudden enlargement had upon her mind was to convince her that she owed a very decided duty to Pennyfold's mother.

In her childhood Letitia had seen Mrs. Drupe occasionally, but of late years never. She did not know what had caused the lack of sympathy between her Aunt Softly and Pennyfold's mother ; perhaps she had never given the subject much thought, but the effect was to exclude the good woman from the world in which she lived. During their happy wooing days the thought had often occurred to her that she would like once more to know Pennyfold's mother ; but the secrecy they found it necessary to impose upon themselves had ever made that a prospective good.

Now, however, that circumstances were changed, Letitia longed to make the acquaintance of the afflicted mother. Her mind brooded on the subject for several days with growing desire ; finally, a couple of days prior to his next appearance before the magistrates, she decided to make a journey to Scaleby, and introduce herself. The resolution was no sooner formed than executed, and early one bright afternoon the young lady presented herself before the distressed matron.

It was a pretty sight to see the fair girl make herself known to the mother of the young man whose heart she had stolen, and to mark the grace with which she apologized for not having made haste to know her sooner. There was just enough hesitancy about her manner to suggest to the elder lady that there was something behind. Gradually it came out:

"I came to tell you everything," she said, "but somehow it could not come until you began to question me. I should have been miserable if I had gone away without telling you."

This she said as she wiped away a tear.

Mrs. Drupe was pleased to have the truth out ; it explained much of her son's late melancholy and waywardness ; but the more she thought of it, the more concerned she became.

"But why," she asked at last, "but why did you make such a secret of the affair ?"

"Because both uncle and aunt were against—against our marrying," replied Letitia, casting her eyes on the floor, while a deep blush suffused her countenance.

"Against your marrying !" returned the matron slowly. "How did you know they were ?"

The young lady briefly related the story of her maid's indiscretion.

During the recital Letitia, who had seated herself at the feet of the other, noted a strange expression coming into the eyes and over the countenance of her companion—an expression that, by the time she had finished her narrative, had almost transformed the matron's pale, cold face into one of almost stony hate. Letitia instinctively drew back.

"Why do you look like that?" she asked, after a pause.

For a moment or two there was no answer, then the woman's whole frame appeared to swell and quiver; her eyes were fixed upon Letitia, and they seemed to dart forth lightning as she said, in cold grating tones, as though they had come over the teeth of a saw—

"You have driven my son to commit this crime by your witchery! I can see it all! He did it—and for you!"

So saying she rose to her feet, and in so doing gave Letitia a push that nearly sent her over. The action was almost imperceptible, but taken in conjunction with the look accompanying it, there was no mistaking it.

"What!" exclaimed the beautiful girl, springing to her feet, and almost gasping for breath—"What! you Pennyfold Drupe's mother, and believe him guilty of murder, and I the cause! Oh!—"

The indignant mother stood like a petrification, while Letitia confronted her with dilating orbs, one hand pressing her bosom, the other tugging at her hair, like one distraught, at the same time crying, "Shame! shame!"

"Shame, indeed!" almost hissed the petrification.

"You—his mother—cannot believe such a thing! It is impossible!" exclaimed Letitia.

"What else can I believe?" ejaculated the matron. Have you not shown me the guilty beginning of all crime? An earthly love, deception, envy! God forgive you for seducing my son from the path of virtue—my son, who till he knew you, did no sin!"

The poor girl cried out like one struck with a sudden fierce pain, and ran out of the house crying, "Shame! shame!" and was hastening down the village before Mrs. Drupe well knew what she was about. Then the stricken mother sank into her chair and sat staring into the void, where she saw her own sad life, and overhanging it the darker, drearier shadow of a still blacker future.

Meanwhile Letitia was hurrying homewards over the fields, a prey to a grief no less poignant than that of the poor heart-broken mother.

So possessed did Mrs. Drupe become with the idea that her son had been driven to murder Mr. Softly because of his opposition to his marriage to Letitia, that she could not be prevailed upon to attend the court at the adjourned hearing. She was a woman, as will have been seen, of great singleness of mind, and of such a heroic probity, that she would rather have seen her son go to the gallows than be a party to an untruth. She was, too, a woman of uncommon clearness of understanding; hence, in the narrative of the murder which had appeared in the *Observer*, plausible as it had seemed to almost everybody else, was to her intelligence lacking

the one essential thing necessary to verisimilitude—a motive. This, by Letitia's confession, had been supplied, and it seemed to her over-heated religious imagination that everything was now rendered plain.

While being a devoted and obedient son, Pennyfold had for several years past been less earnest and precise in his religious convictions than his Calvinistically rigid mother could have liked; she had attributed what she called his "indifference" to his scientific studies, and nightly prayed for "a strengthening of the barriers of faith, in order that corruption might not creep in and leave a loop-hold for Satan and his wiles." She was especially fervent in her admonitions against indulging the "lust of the eye," which she characterized as "the beginning of sin," the first yielding up of the "avenues of the mind" that led to the inrush of so many evils. Hence, believing too as she did, that earthly beauty was a "wile of Satan," there is little wonder that she saw in Pennyfold's love for the fair Letitia the first step in a backsliding that resulted in murder.

It was all so clear to her mind that she felt, if the secret was to be kept to herself, she must stay at home. She did not even trust herself to write what she felt, but confined herself to inditing to him a short, formal note, recommending him to "seek that which was above all price—the peace of God."

It was a terrible blow to the young man to find that, for some unexplained reason, his mother was not with him—that a shadow had risen between them. He murmured; and as he again stepped into the dock, and his eye, scanning the court, once more failed to see the object of his devotion, his heart rose up in rebellion. Presently, however, there was a rustling at a side door; all eyes were turned in that direction, and Pennyfold knew, without daring to look, that Letitia and her father had entered, and taken seats at the end of the platform on which the magistrates sat. He felt the blood mount in an impetuous torrent to his temples, and for a moment the court swam before his eyes.

Waiting until the mist had cleared from his eyes, he ventured to look in that direction, and met Letitia's full, steady gaze in return. It might have lasted ten seconds, it appeared much longer; it was a look that never faded from his memory, nor ever will. The magisterial proceedings interested him no more; those azure orbs had lifted him out of prison; he seemed to be hovering above an infinite ocean upon whose bosom was endless peace; it seemed to be calling him, and in view of that everything else seemed local and transitory.

The evidence produced, however, was not without interest to those watching the case. In the first place, it was asserted by the medical witnesses that the corpse had the appearance of having been in the ground from eight months to a year, and that the very advanced stage of decomposition which it had reached was caused by the lime that had been thrown upon it when buried. Although it was not possible to determine the sex with absolute certainty, yet from the size of the skeleton, and especially from the development of the skull,

there was little doubt of its being that of a man. Death appeared to have resulted from concussion of the brain, there being a large dent on the left side of the skull, just above the mastoid process, such as might have been caused by a blow from a hammer or other heavy instrument, and so forth.

Further, an old tramp was produced who swore that he had seen the prisoner about the time of the murder leave Hockley Wood with a spade under his arm, and go towards the village.

Pennyfold heard all this without astonishment; he had got beyond that stage; he thought if so much could be proved against an innocent man, anything could be proved against one, and there was little use in struggling against fate. For aught that appeared in his manner, he might have been the least interested of anybody in the court.

In the result, he was formally committed to take his trial on the capital charge; Mr. Lake, his solicitor, preferring to reserve his defence.

Pennyfold was glad to get back into his cell, away from the eyes of so many curious and unsympathetic spectators. There, alone with his own thoughts, he could revel in the one joyous sensation of the day—the sight of Letitia, and the long, calm, sympathetic look she had given him. The look had not been repeated, for soon after she had left the court; the cold prosaic manner of dealing with a fellow-creature on trial for his life was too much for her ardent, emotional nature.

(*To be continued.*)

Book Notices.

Myths and Dreams. By EDWARD CLODD. London: Chatto & Windus. 1885.

In the empty pride of his heart man has pictured his original progenitor as springing into life fully armed, like Minerva from the brain of Jupiter, the all but deified lord of a world for which the whole of the rest of the visible universe was and is created. Long fostered as this fond illusion was by ecclesiastical tradition, it is only in these latter days that the true history of man's advent upon earth and subsequent development has been made known, and his insignificance in the cosmos become apparent. Between the primitive savage ancestry of our race, however, and a Newton, a Shakespeare, a Milton, an Airy, a Tennyson, or a Thompson, how great and seemingly impassable a gulf is fixed; and hence the study of the steps by which this gulf has been bridged can scarcely fail to be of the most absorbing interest. How current ideas of the supernatural have had their origin in the myths and dreams of man in an early stage of his history, Mr. Clodd sets himself to tell in the work before us, which is an expansion and enlargement of a few essays on the same subject which originally appeared in *Knowledge*. To those who have read that portion of Mr. Clodd's volume there, his charm

of style and closeness of reasoning will be already familiar, and they will possess themselves of his completed work in order to follow out his argument in its entirety. To all to whom this notice may serve to introduce the volume before us we can promise an intellectual treat of a high order in its perusal, and the acquisition of sounder views of man's actual place in nature and sources of belief in the supernatural than they possessed prior to reading it.

Facts and Gossip.

THEY certainly have a practical way of teaching children in some of the American schools. A large educational establishment in New York is called the Olivet Mission, and at the examination of scholars here a number of visitors were lately invited. Domestic economy is one of the subjects taught, and to this the most practical application is given. The girls were examined in doing chambermaid's work in a bed-room fitted up for the purpose, and then they had to set a dinner-table. Moreover, they had to cook a dinner to put on the table when it was set, and music is here combined with cookery. Songs accompany the domestic exercises, and these songs are not vague addresses to the "Sweet By-and-by," or "Sweet Dreaming Faces," but ditties of a highly-instructive character. "If potatoes you would boil, And potatoes would not spoil, You must open wide your eyes, Get potatoes of one size. Then you pare them very thin, For the meal is next the skin. Cover them with water cold. Pray, remember what your told." So one of the ballads runs, and the moral, it must be admitted, is excellent. The little girls turned their lessons to good account when they were examined, and cooked a capital dinner, which a reporter describes as a "delicious success." The repast was equally well served, and another song instructs the pupils to "Pass the tray like that, And try to hold it, Always hold it, Very, very flat." Still more songs set forth the impropriety of making a noise or breaking a dish. The Olivet Mission is evidently a very admirable institution.

PROFESSIONAL men should have recreation largely of a physical nature. A brisk walk is what physicians most frequently recommend for exercise, but for a person not accustomed to exercise this is not always beneficial, for his brain being the only part of his body that is kept in activity, the exercise forces the blood into the head, and he returns home with a severe headache. Such a man should take passive exercise, such as rowing, sailing, or hunting, where his mind could be in slight activity also. The majority of men engaged in mercantile pursuits get enough physical exercise from their every-day life, and their recreation should be of mental nature. A few days in the country, a change of scenery, is beneficial to every one. Stock-brokers and bankers require a very quiet recreation, but instead they try to get their recreation from the most exciting of

sports, which is really no change from their daily life. Mechanics and clerks are recommended to attend light entertainments, such as concerts, lectures; or play cards, chess, checkers, or other games of that nature. Women and children, the former especially, rely too much on excitement for recreation, and carry it to such an excess that it becomes simple dissipation. A distinction must be understood between excitement which invigorates and excitement which exhausts. Dancing and roller-skating are excellent exercises, but under the excitement of the music is too often continued to exhaustion.

THE other day a professor of phrenology was lecturing on phrenology at Watrons, in New Mexico. Several of the audience went upon the platform, and the lecturer described their dispositions as shown by the bumps on their heads. Among others was a cow-boy named Fosdic. Fosdic's bumps did not appear to the lecturer to indicate a disposition of unmixed benevolence and goodness. Fosdic was so aggrieved at the unfavourable observations of the lecturer that he drew his revolver and fired freely at the lecturer. The latter escaped with his life; but he does not intend to examine any more heads in New Mexico.

THE nutrient value of fruit in virtue of its component starches and saccharine materials is generally admitted; and while these substances cannot be said to equal in accumulated force the more solid ingredients of meat and animal fat, they are similarly useful in their own degree, and have, moreover, the advantage of greater digestibility. Their conversion within the tissues is also attended with less friction and pressure on the constructive machinery. The locally stimulant action of many subacid fruits on the mucous membrane deserves mention. To this action further effects, which aid the maintenance of a pure and vigorous circulation, are indirectly due.

AN eminent German professor once assumed that, as a certain size and mass of brain is essential for the exercise of the mental faculties, therefore all the human race must be furnished with an equal amount of brains. This truly Teutonic theory has since, however, been effectually dissipated. An elaborate paper was read not very long ago before the Royal Society of England, in which the existing evidence as to the weight of brain among different nations was analysed. The average brain weight for the English is stated to be 47·50 ounces; for the French 44·58; for the Germans 42·83; but there are discrepancies in the results of different observers, some giving a greater average than this to the Germans. The Italians, Lapps, Swedes, Frisians, and Dutch come into the category with the English. Among the Asiatic races, the Vedahs of Ceylon and the Hindoos give a mean of over 42·11 ounces. The skulls of Mussulmans afford a slightly increased average of brain weight over those of the Hindoos. Two skulls of male Khonds—one of the unquestioned aboriginal races of India—show a brain weight of only 37·87 ounces. The general average of the Asiatic table shows a diminution of more

than two ounces when compared with Europeans. The general mean of African races is less than that of European races, although there are great differences; the Caffre rising high, and the Bushman sinking low in the scale. The average of the whole of the aboriginal American races reaches 44·73 ounces, which is 2·14 ounces less than that of the European races. The Australian races show a brain weight one-ninth less than that of the general average of Europeans. The Malays and others of the Oceanic races, who migrated boldly, for commercial purposes, over the North and South Pacific Ocean, and occupy the islands, show a tolerably high average of brain weight; and, on arriving at this section, we return in some measure to the large brain weight of Europeans.

Correspondence.

To the Editor of THE PHRENOLOGICAL MAGAZINE.

SIR,—I shall esteem it a privilege as well as an honour to be allowed to add my testimony as an educator to that which I know you to be so extensively and constantly receiving, from “all sorts and conditions of men,” as to the supreme importance of phrenology, and its value when applied to the regulation of our mental and physical conduct. I feel that I have derived immense benefit from listening to your lectures, and from following your advice, and therefore feel myself under obligation to do all in my power to promote the spread of the important truths which you so eloquently and earnestly teach.

Wishing you every prosperity and success in your great work,

Your old and faithful disciple,

*Kilgrimol School,
St. Ann's-on-the-Sea, via Preston,
April 18th, 1885.*

JOHN ALLEN,
Principal.

CARE should be taken not to discourage the young in their natural fondness for physical exercise. Many boys and girls have relinquished sports eminently fitted to invigorate and strengthen them, and which they thoroughly enjoyed, because of slighting remarks of their elders, and from fear of being thought childish. We cannot estimate the evil consequences that may follow when we persuade a young girl that good hard play is unladylike, or a boy that it is unmanly. On the contrary, such sports should receive our most thorough respect and most cordial sympathy. Not to shorten, but to prolong the time during which they may be suffered to promote health and happiness should be our aim; and when the taste for them declines, our effort should be to replace them by more congenial exercise, but never to sink into physical inaction ourselves, or to countenance it in any one over whom we may exert an influence.

Answers to Correspondents.

[Persons sending photographs for remarks on their character under this heading must observe the following conditions :—Each photograph must be accompanied by a stamped and directed envelope, for the return of the photographs ; the photograph, or photographs (for, where possible, two should be sent, one giving a front, the other a side view), must be good and recent ; and, lastly, each application must be accompanied by a remittance (in stamps) of 3s. 6d., for six months' subscription to the MAGAZINE.—ED. P. M.]

AJAX.—1st question, Yes. 2nd question, Dictated from his head, and written at the time.

G. G. G. (Leeds).—The photograph of the above indicates great ardour, earnestness, intensity, and sincerity ; also great frankness, candour, open-heartedness, and a confiding disposition, with a great amount of mental and muscular activity ; must be continually employed in order to be in his element. He has great perseverance, integrity, and ambition to excel ; also a very distinct idea of justice, and he strives to be honest and circumspect. He is adapted to study and imparting knowledge to others, but in order to excel must cultivate Language, so as to be more copious and free in his style of talking. He can do business for others in a mercantile way, but had better secure an education, and devote himself to some intellectual or moral pursuit. He is clear and distinct in his utterance, appreciates music, and has talents for a writer.

E. H. K. (London).—You have more than average decision of character ; are tenacious, steady, persevering, conscientious, and faithful. You have practical common-sense talents, and look at things as they are ; are governed by experience, and not much inclined to abstract reflection. Are characterized for domestic affection, strong love of nature, and that of the most sincere and devoted kind. Are liable to be too much prejudiced by your friendships. Your sympathies are easily excited, especially towards objects of love. You have not much cruelty or revengefulness of mind. Your character has changed considerably within a few years past ; are more inclined to think and reason, and should be characterized for soundness of judgment.—The child in the arms has a very favourable development of brain all around ; there appears to be no defect ; the head is developed very favourably in the superior region. It will early manifest an inquiring, original cast of mind ; will be ingenious, imaginative, and imitative ; has more than average executive-ness, and unless it is kept pleasantly occupied with some kind of play, it will keep somebody else employed in looking after it, and picking up things that it scatters about.

M. (York).—This gentleman has a working temperament, is of the busy, restless, uneasy kind ; is comparatively executive and rather spirited ; is characterized for frankness, and for having a

confiding disposition; has a great thirst for knowledge, is much interested in nature, science, and history; is a great observer and student of nature; is continually gathering information from various sources, and could have made a very good scientific man, and succeeded as a physician, veterinary surgeon, or a naturalist. He delights to explain things to others, and he tells what he knows. With proper culture could make a good lecturer or speaker; he has a dry way of saying things, and brings odd things together, makes strange comparisons, and presents his ideas in a condensed form. He is definite and direct in his style of talking; must have been called an old boy when a child; he is not particularly youthful. Although polite and respectful, yet has not much suavity of manner. He always keeps up his dignity; has a high degree of self-respect, and must have some aristocratic blood in his veins. His moral faculties are favourably developed, and his disposition is to keep up the old, substantial, theological, Sabbatarian, views of religion. He would make a good husband, but would want a wide-awake, pliable, social, industrious, economical wife, with light hair and complexion, and a favourable degree of culture.

W. D. M. (Grimsby).—The young lady is favourably organized for health, happiness, and long life. There appears to be balance of power; she is subject to extremes only when highly excited. She is full of animal life and vivacity of feeling; is the life of the company, and attracts those with whom she comes in contact. Has quick observation, good conversational talents, favourable qualities for a scholar. She is mild and amiable in disposition, easily influenced by mild measures in any right course, but is very tenacious in her opinions on certain subjects; hence has stability of character, tenacity of purpose, high ambition, and a strong desire to excel and be popular. As a wife she will be nothing else than one-half of the family, will take her place by the side of her husband, and will manifest more than ordinary family pride. She is favourably organized for a wife and mother.

W. D. M. (Grimsby).—The young gentleman is highly organized, has a predominance of brain-power, is scarcely up to the mark in physical, vital force and energy; will accomplish much more through the brain than the muscles. He needs to take proper care of his health in order to accomplish what he desires. He has capacities for a student, a linguist, an artist, a writer; or, if in business, to do the intellectual part rather than the outdoor buying or even as a salesman. Can keep the books, write the letters, negotiate, systematize, and plan successfully; but such an organization should study and be a professional man, an artist, or devoted to literature. He is cautious, rather reserved, very sensitive, quite ambitious to avoid criticism and appear well. He has taste, sense of refinement, and is elevated in the tone of his mind. He has gifts as a musician, has clear distinct pronunciations in conversation, is not a trifle in any sense of the term; not subject to so many temptations as many.

The moral brain is all favourably developed, which should have a regulating if not a controlling influence. In spirit and tone of mind he is adapted to the young lady just described, only she is superior in vital power, and will live and ply together, for they will both be proud of each other.

S. S. S. (Aberdare).—This young lady will appear to the best advantage by those who know her most intimately; she possesses a kind of reticence among strangers that does not allow her to show off to a good advantage, but where she is interested she manifests an ardent spirit, and an earnestness and sincerity that others appreciate. For the most part she manifests consistency and uniformity of life and action. She has command of herself, and knows how to regulate her feelings, and she strives to make one act of her life harmonize with another. She is much inclined to study herself; and the more she probes her mind and motives, the more she becomes a puzzle to herself. She is strongly inclined to the exercise of sympathy, sentiment, and affection, and has been not a little tempted to devote her life to doing good. She is almost willing to sacrifice the common pleasures of life for the sake of being useful and doing good to others. On favourite topics she is easy and even copious in conversation, and those topics are connected with religion, integrity of life, and the affections. She would not make a mistake if she devoted herself to culture, and to labour of usefulness. She will make a faithful, true wife, but must not be neglected by her husband.

T. C. (Cleator Moor).—This gentleman at present is wanting in vital power and animal force; but in the order of nature, if he is careful of his health, he may change materially in general physical appearance, becoming more stout, robust, and better balanced. At present there is not sufficient physical strength to meet the desires of his mind. He has a kind of intellect that wants to learn everything, and would pursue the acquiring of knowledge under many difficulties rather than be ignorant. He has good powers of observation, and can easily make himself familiar with the external world, with things and their qualities and uses. He has fair conversational talent, which would repay him to cultivate as a speaker; in short, if he will give himself to intellectual and moral culture for some public position, it would not be a mistake. If he did not study and become a professional man in some way, he should devote himself to an agency where he can travel and negotiate, or to some other business requiring more mental than physical strength. His mental powers are favourably developed, with the exception, perhaps, of memory of events, of experiments and past transactions. His moral brain is favourably represented, giving tone and quality to his mind. Phrenologically speaking, he is qualified to fill almost any sphere he may aspire to. As a business man his forte will be as the financier and the general manager of the establishment. With proper affinities, with higher powers, he could sustain himself as a preacher.

E. B. (Gloucester).—The young lady has a large heart, ample arterial blood, with great earnestness and sincerity of mind. Is subject to rather high states of excitement. She is very anxious to know everything, puts direct questions, and is quick to take a hint and see the bearings of a subject. Is decidedly ambitious, and desirous of being a favourite. Very sensitive to criticism, decidedly mindful of everything that affects her character. She has favourable intellectual capacity which would qualify her to teach, write, or lay out work. She is particularly intuitive in discerning character and motives, and her first impressions are generally correct. Among her friends she is quite easy and copious in conversation. She is motherly in her disposition, and as a wife would manifest more than ordinary family pride.

J. L. (Sunderland).—The organization of this lady indicates a strong constitution, which comes from the masculine side of the house; great tenacity of health, and power to resist disease; great capacity to enjoy life and action. Her intellectual abilities are of the practical, scientific, sagacious kind. She acquires knowledge easily from observation, is a close observer, and would make a scientist. She has talents for drawing and working by the eye; would be very fond of the study of anatomy, and would excel in dissecting. She is forcible in speech, quite to the point, and concentrated in her subject. She is very intuitive in her discernment of character, and what she says is generally repeated because of its pithy style. Her moral brain indicates stability, determination, perseverance, tenacity of purpose; and from a child she has been noted for having a character and a will of her own. She is disposed to take the responsibility of her own actions on herself, and is cool and has presence of mind in times of danger, and is not afraid of responsibility; in fact, her mind acts in almost too positive a style. She is none too cautious in committing herself, or in taking a responsibility, but she has a remarkable character in many different ways, and will make her mark in the world.

IN them hath He set a tabernacle for the sun, whose burning balls which without the firmament would be seen but as an intolerable and scorching circle in the blackness of vacuity, is by that firmament surrounded with gorgeous sunrise and tempered by mediatorial ministries. By the firmament of clouds the golden pavement is laid for His chariot wheels at morning; by the firmament of clouds the temple is built for His presence to fill with light at noon; by the firmament of clouds the purple veil is closed at evening around the sanctuary of His rest; by the mists of the firmament His implacable light is divided and its separated fierceness appeased into the soft blue that fills the depth of distance with its bloom, and the flush with which the mountains burn as they drink the overflowing of the day-spring.—*Ruskin*.

THE
Phrenological Magazine.

AUGUST, 1885.

LORD RANDOLPH CHURCHILL.



It is still a matter of inquiry among philosophers why it is that there is so much difference among men when they are alike in general make-up and in number of organs and functions. The phrenologist accounts for it by the temperaments, stock, health, strength or weakness of the different faculties and functions.

Some men by constitution are modest, retiring, and reticent; others are bold, forward, and free-spoken. Some men speak to their juniors in a respectful manner; others speak to and about their superiors, twice over in age and experience, as inferiors, and as deserving criticism. Some are full of sympathy at the downfall or misfortunes of others; while others will do all they can to hasten the ruin and downfall of their opponents, and glory in it, especially if they are advantaged thereby. Some boys think they know more than their teachers do, and never listen to instruction, but contradict their teachers; others feel their ignorance, and give strict attention to what their teachers say. Some boys rule the house, dictate to their parents, and act as though all the rest of the family were made on purpose to wait on and serve them. Some children will stare strangers straight in the face without a blush or a wink, as if they had a perfect right, and even take liberties and ask impertinent questions, as though the stranger was of no account when compared to them; while others are shy and keep out of the way, and watch their chances to see and not be seen, to listen and not be heard. Some students and young business men, and preachers, and politicians, are not content to work their way gradually up to the head, but want to keep their gloves and hats on, and want to come right in on a par with those who have been studying thirty or forty years to gain their position. Some are willing to assume any degree of responsibility if they can be promoted, as though responsibility was nothing, and all

else might be sacrificed for their advancement; others are so modest, honest, or sensible, that they decline to take great responsibilities, although they are thereby promoted; they so feel their unworthiness that they have to be urged to accept office. Some are very precocious, make themselves very prominent; are at the head of their class; are full of ambition, and very anxious to attract attention, and their first sermon or speech is full of display and eloquence; but they are very liable to overdo, and, like a meteor, attract more attention than the sun, and yet are so attenuated that a star could be seen on the other side. Some students talk as though they knew everything, and were of vast importance, because their forefathers had all been to college, held office, and had done some mighty deed; while the most they knew was what their tutors told them; others make no reckoning of their forefathers; they are only conscious of their own ignorance, and the more they know the more they see is to be known.

Lord Randolph Churchill is a marked man; he stands alone in point of having a peculiar organization. He is medium in stature, with a strong neck, a prominent brain, and a predominance of the motive mental temperaments, with less of the vital; hence he is not so strong in controlling animal impulses and passions; but he is active in body and mind, and under the control of the more vigorous and positive powers of his nature. He would create work rather than sit down and take life easily and do only what was necessary. Physically he is active, easy of motion, and has good control of his muscles. His brain is the controlling power of his organization, and his mind is as restless as a Voltaire or a Pitt. The speciality of his mental operations is not deliberation and comprehensiveness so much as quickness, boldness, and force. He has about eight prominent developments of brain, which should have a marked influence on his character and actions. They are Language, Individuality, Causality, Ideality, Firmness, Self-reliance, Combaticiveness, and Destructiveness, and they are none too much restrained by his sympathies, respect, and circumspection; hence they stand out in bold relief, and give him his peculiarities of mind. Language is so large as to enable him to talk easily and copiously, even though he has not much to talk about. He has several of the elements of the orator—not of the John Bright kind, but more of the style of the Earl of Chatham. He could not easily be a smooth, graceful speaker; for, like Chatham, he is too individual and pointed in his style and manner of speaking. His Combaticiveness and Destructive-

ness give force, severity—even to harshness—and sarcasm ; while his strong self-reliance and great will-power dispose him to speak with authority, and without any qualification. His Individuality, being large, leads to observation, gives him a ready, quick sight as to things around him. He readily identifies persons and objects, and gathers information quickly as he goes through a new place ; hence he will generally have enough to talk about. His memory of statistics and historical facts may not be specially strong, yet strong enough to be a basis for conversation. His Causality is



specially developed, and the tendency is towards Mirthfulness and Ideality, giving originality of mind, power to comprehend principles, quickness to see the points at issue, and ability to throw off new ideas. It, in an educated mind, disposes persons to act with definite and direct objects in view, and to bring everything to bear to the accomplishment of those objects. He must love to argue and discuss, and with his large Mirthfulness, will take pleasure in exposing

the false reasonings of others, and in ridiculing them. He is quick to notice the absurd and ridiculous, to take extravagant views of things, to magnify, embellish, and give full ventilation to his subject. His Temperament, joined to his Language, Individuality, Causality, Mirthfulness, and Ideality, would give him a tendency to magnify, to make the most out of his side of the question, and to present his ideas in an extravagant light. He is a great lover of beauty and style, especially in nature, in things that grow, but may be interested also in works of art; hence he will want the best of everything—the handsomest horse, and the most perfect animals about the house. His head is very high over the ears, which indicates prompt decision, great determination, and for the time being unbending purpose which would know of no compromise; which quality of mind, joined to his Self-esteem, would render him willing to take responsibilities, to want authority and influence, and to feel perfectly at ease when everything went as he said; and it would make but little difference with him whether it was a servant he was employing or the fate of the nation, for he would have equal confidence in the one case as in the other. He is particularly large and well filled out around the ears, which indicates the elements of force, courage, executiveness, and tendency to thoroughness. His sympathies are scarcely strong enough to mellow and modify this element of his nature. He may not fight with his fists, nor kill with his sword, but his words would be like bullets shot from a gun, and his spirit of opposition would be like a regiment to contend with; they give him an amount of executiveness that would dispose him to carry everything before him, and not stop to shed tears over the vanquished, but rather to rejoice that he had conquered, without stopping to count the cost on the other side. All these qualities of mind are so distinct as to render them leading points in his character; hence, energy and force, joined to a contentious spirit, self-reliance, independence, determination, tendency to extravagance of remark, general comprehensiveness of mind, love of argument and opposition, originality of thought, power to strike out a new course, quickness to see changes to be made, and capacity to individualise objects, joined to a talent to talk and present his ideas, are all prominent points of character. Were there more cautiousness, circumspection, blandness of mind, consciousness of superiority, feelings of sympathy and tenderness towards others, and power of intuition, with less bluntness and directness of remark, his character would appear much more perfect; but he is as he is, and will make his mark.

The danger is that he will overstep that mark, carry too much sail, try to do too much in too short a space of time, and thus weaken his influence and shorten his days of labour. He has such an abundance of electricity that he can bring to bear in times of excitement, that he can produce thunderstorms and violent lightning; while if his organization were more even, disposing him to take more time to gather and use his forces, he would not have come forward so suddenly into notoriety, but would remain in the field of action all the longer. In many respects he is like Beaconsfield, with the exception that he has more Causality and Destructiveness. He is not one to be led by others, but prefers to do the leading himself. He may possibly take advice, but it will be after he has got into a difficulty and wants assistance in getting out. He will as far as possible feather his own nest, will gather all the honey he can, will be the most conspicuous in the field, or be dissatisfied, and cannot possibly be content until he is at the head.

L. N. F.

Lord Randolph is too well known for it to be needful to add any biographical particulars. The wonder is that a man of such independent views, so much originality, such apparent sympathy with the people, and so little respect for authority as such, should be a member of the Conservative party. Had he been born in any other rank of society than that to which he belongs, he would have come out as one of the most pronounced of Radicals. He will not long remain in the position in which he at present stands. He will either become a more pronounced Tory (of the old school), and to a certain extent a reactionary, or he will break from his present surroundings and become a Young England Liberal, what one might call a National Radical. But all depends on the activity of his sympathies.

ED. P. M.

UTILITY OF PHRENOLOGY.—II.

BY FRED C. BARRATT.

SOCIETY in general owes a good deal to its matter-of-fact men—to men who perceive a thing only to apply it to a use. Many a cleverly-constructed edifice of theory has been shattered to fragments by the simple, rude attacks of those men whose first question is, "Of what use is it?" And perhaps the present age stands in as great need of such characters as any previous one. When we have a score of remedies pro-

posed for every evil that afflicts us ; when new methods and new systems follow on each others' heels in bewildering succession, like the parts of a circus pageant, or the figures in a Lord Mayor's Show ; when speculative theory is taking the place of strict inquiry ; when even science grows impatient for results, and goes *before* her facts instead of following *after* them ; when religious people neglect precepts to establish beliefs, splitting themselves into sections over the meaning of a word ; when nearly every public politician, not responsible, has his own self-patented method of government ; when, in short, throughout all the various departments of human society, change, improvement, advancement, and reconstruction, seem to be the order of the day ;—when, I say, we recognise all this as existing in our midst, we are bound to acknowledge our great obligation toward this class of men for that staying, checking, ballasting influence which they exert.

But society not only *owes* a good deal to these practical characters, it pays them a good deal too, and that in the way of attention, interest, and respect. Your matter-of-fact man is in little danger of being under-estimated. He talks about things that people think most about, and have the most to do with—the common-places of every-day life—he is therefore easily understood. He deals with common experience, and therefore gains a ready entrance to the mind. He touches the immediate interests of men, and so wins their favourable regard. Ordinarily people are more influenced by men of this stamp than any other—that is, directly. The exponents of phrenology have always recognised this truth, and have acted accordingly. From the very first the utilitarian test has been applied by themselves ; as any one acquainted with the history of the origin and development of phrenology must know, and that most crucially, and with the most satisfactory results—results increasing in importance and value as time advanced, and the science became more perfected. These proofs of its utility have continually attended its progress and development in the past, and they will do so to a far greater extent in the future, when its principles are more thoroughly understood and applied. For great as those results have been, which we have already seen to follow its path, they are as nothing to those which must accrue in that future when the age of true wisdom and enlightenment comes—

. “ That season, by gifted minds foretold,
When men shall live by reason, and not alone by gold.”

Meanwhile, however, we find ourselves only in the dim

dawn of that glorious day, and we must take the present as we find it. And this leads us to remark, in justice to the utilitarian, and having said so much in his favour, that, useful as he undoubtedly is to society, he is not in all respects its best friend. He is not a discerner of the times. He is not progressive in his ideas. He does not believe that every disclosure of natural science, supposing that disclosure to be one of truth, brings along with it a benefit direct, or indirect, to himself and to his fellow-creatures. Nor is he willing to recognise the fact that those blessings, which any particular discovery may be calculated to bring, are often delayed only when they seem to his view either to be entirely absent or not to follow to any important extent. Sometimes, indeed, he is an obstructive, like that justly proverbial individual who introduced the "cow" as an argument against George Stevenson's proposed railway. Yet that "steam-horse" was destined to beat his "cow," although he could not see it. No, he is not the man to lead others into "fresh fields and pastures new," but is rather suspicious of them; he is conservative in spirit, and prefers the old paths. Notwithstanding all this, however, we admit to the full the right of every one to urge to the utmost any objection he may entertain in his mind against the practical utility of phrenology, provided only he keep within the limits of reason and fair play. We therefore invite our friends, the experimentalists, and all others interested in the subject, to accompany us for a short time whilst we endeavour to take them through some of the common walks of life, in which may be found instances and examples of the utility of phrenology.

We will take first the department of home. Can phrenology do more for us here than we could do for ourselves without its aid? Yes, it can. It can tell you the nature of your child, before that nature has manifested itself outwardly—a thing impossible to discover by any other means. The advantage of this knowledge is simply incalculable. No training of children can be said to be sure or correct, as a method, which is not based upon a knowledge of the main elements in the child's character with which we have to deal; and without the aid of phrenological knowledge these cannot be discovered; you have to wait until they develop themselves, and then adapt and re-adapt your methods as you find them unsuitable. Or, what is a greater mistake, perhaps one uniform system is adhered to under the belief that everything depends upon having a fixed and definite mode in training the juvenile character, and sedulously conforming to its rules. In either case success—if it should follow—is the result of

accident rather than of design. For in the one case you let the child lead the way by force of his own individuality, which is something like following one's nose through a pathless wood; and in the other you entirely ignore the existence in the child of any fundamental operative principles whatsoever. How much better is it to ascertain at the first what, as Solomon expresses it, is "bound up in the heart of the child?" Not with the idea of forming its character after a certain model, for that were impossible—thank Heavens!—but to direct and regulate the currents of that nature according as a wise use of this knowledge shall dictate.

The same by instruction. Phrenology enables us to tell the capacity of a child to receive any particular branch of instruction without having to resort to years of experiments to ascertain it. How much of time and money are yearly wasted, nay, worse than wasted, upon "good" educations! Ah! if the sacrifice were only that of time and money! Educate a child in accordance with the plan of his organization, and you minister to his highest happiness and enjoyment. But treat him as if he were a sort of mental-ometer, a receptacle of so much supposed cubic capacity for holding learning, and, if he has not by nature an extraordinary fund of health and strength, the end will be a total loss of real mental vigour in the most apt of pupils; while in the case of the unfortunate dullards, and of those whose faculties are of that kind which are late in starting into action, no physical slavery can exceed or equal the pitiable effects produced upon the spirit of the sufferers. No wonder that so many enter upon the career of adult-life with so inferior an estimate of its importance, and with such aimless ideas. They have not been brought into contact with the great system of things by which they are encompassed, as the theatre in which *they are to play their part*; so that when the time comes for them to enter upon the stage of life, they find, to their utter confusion, that they have not been taught their part; or, if they have had a part assigned to them, it is one in which they have little or no interest. Now, it is the business of phrenology, with respect to education, first to determine, by examination of the head, what talents the child may possess; and then, having regard to temperament and physical constitution, point out the most efficient means of bringing into proper action all the mental faculties, and in such a way as to yield the most pleasure in their exercise, always keeping in view, for practical purposes, the chief bent of the mind when any faculties take a prominent lead, so as to make the most of the stronger powers. If this is not the better way, it is the

one Nature prescribes, and stamps upon it, moreover, her sign of approval by rewarding its adoption with unvarying success.

In connection with the bringing up of children there is a period at which, more than at any other time during the history of childhood and early youth, the parental anxiety is called forth, and the parental wisdom is taxed to its utmost capacity. It is at that "tide in the affairs" of their maturer years when they are about to enter upon life for themselves. There are, broadly speaking, two ways which present themselves to the minds of thoughtful and conscientious parents for adoption at this important juncture. One is, to pray to God earnestly that He will guide them directly and specially to choose a suitable pursuit. The other is to look out for one which presents the most advantages in all respects, and is the most remunerative; of course, with the same dependence upon the Great Disposer of events in this matter as in all other affairs of life. Now we apprehend that neither of these is the correct course to pursue.

"I say, my love," says the husband, "what *shall* we do with Bertie? You know we *must* decide quickly; this is his last month at school."

Wife: "My darling; I thought we *had* decided. You know his Uncle Tom means to take him; he always said so. Didn't he, now?"

Husband: "Means to take him, eh? But how if Bert does not care to go to the farming?"

Wife: "Why, John, dear, how ridiculous you are, to be sure; as if that made any difference! A boy is not expected to know how to choose for himself in such a thing. Besides, you know, Tom thinks so much of him, and always has done; I am sure dear Tom would be highly displeased if we did not agree to his wishes. And you know you never *have* objected to it before."

Husband: "I have never objected to it for I have never seriously thought upon it until lately; but it seems to me that the boy's tastes are in another direction; he seems more for study than for agriculture."

Wife: "Really, John, it *is* stupid of you, bothering yourself in this way so unnecessarily; I should have thought you would have felt glad to be so relieved of the difficulty of choosing for at least one of the children, when you have so many others for whom you will soon have to provide positions. And you do not think of the advantages. You know, dear, that Tom thinks of no one as he does of his own sister's Bertie. And there will be both the mill and the farm for

him ultimately, if he only behaves himself; which I am quite satisfied he will."

Husband: "Right, my love, quite right. It was not that I had any objection on my own part to his going into the farming, but only on the ground of his apparent want of interest in such things. However, he must do as I have had to do, fit himself to his circumstances."

The result is that Bertie is dispatched to his uncle pretty much as you would transmit any very valuable piece of merchandise. Everything external thought of for his safety, comfort, and well-being; but the young, growing, expanding, throbbing *self* within, cruelly unheeded, consigned to a sphere as little in harmony with his own nature as the desert of Sahara would be to that of a young king-fisher, and as much in his "right place" as a skylark would be in a mousetrap.

But Bertie did not succeed to the mill and the farm. He did not "behave himself," simply because he could not. He had very little business talent, and no interest at all in farming; so after six years of mill-horse drudgery he turned his back upon all. He has tried a dozen things since then, with no good result, and now considers himself doomed to a thwarted life. The position he *could* have filled, with honour and credit to himself and to the pride and joy of his friends, he now has no ambition to aspire to. As to his disappointed and sorrowful parents, they have been visited by advisers-after-the-fact by the dozen, who have shaken their wise heads, and remarked: "Ah! you see, he was not adapted for business." "Always after books you know." "What a pity you did not let him follow something of that kind." "I wonder almost you did not." "How very strange; isn't it now?" Do you know Bertram Hardcase at all? I think I know him only too well.

Now listen to the following conversation between a working man and a lady district-visitor:

Miss Piety: "Dear me, Mr. Goodsense, your family seem to be all growing up at once. You must find it hard to know what to do for the best for them in the future, in starting them in life."

Mr. G.: "Aye, that we do, Miss; I and the good wife often hold council-meetings, I can assure you."

Miss P.: "And pray about it, too, I hope?"

Mr. G.: "Yes, Miss; every day of our lives."

Miss P.: "Then I am sure you will be guided aright; only pray in faith, and when the right time comes the opening will be made as each one is ready to begin work."

Mr. G.: "I beg pardon, Miss Piety, but I can hardly agree

with what you say about when the time comes, I am more of the opinion that it is better to prepare for the time before it comes."

Miss P.: "Why, how can you do that, Mr. Goodsense? You surely have not decided what you are going to put Mary and the boys to whether they like what you have chosen for them or not."

Mr. G.: "But, perhaps, we may be able to tell what they are likely to take to; or, at any rate"—

Miss P.: "Oh! I see what you have been doing; you have been consulting a phrenologist. Papa does not believe in them; he says they say nearly the same thing to everybody, and what is different they get out of you somehow."

Mr. G.: "Indeed, Miss! well, they did not get to know anything from *me*; and, as to *our* children, they are all so different to each other that one story would not answer."

Miss P.: "But, my dear friend, do you not see how inconsistent you are? You pray to God for His guidance, and then go to man to know what to do."

Mr. G.: "No, Ma'am, excuse me, I go to man to know what God by nature has fitted my child to do—what he is 'cut out for,' as we should call it. I believe that if Providence has so arranged that this can be known, it is His intention that it should be, for the sake of our own children; and as I cannot discover this for myself, not having the learning requisite, I just go to those who can."

Miss P.: "Well, I never understood it that way before. Do you mind telling me what the professor said? I hope you will not think me inquisitive."

Mr. G.: "Oh, no, Miss Piety, I should like you to know. Here are their charts, you can examine them at your leisure, and judge for yourself. And, allow me to say, that both Jenny and myself are much more at ease in our minds since we had them examined. Mary, the phrenologist said, ought not to be taken away from school, she is in every way fitted for a teacher, and will be likely to make her mark in it. Frank he advises us to put behind the counter. Jemmy is to go among machinery; and Ted, who is so different to all the rest, he says is better left to himself more, as he will be capable of choosing, and will be likely to do all the better for choosing for himself. He only wants the means putting into his hands, by education and right training, to make his own way in the world. So you see, Miss, *ours* was not all one story."

Miss P.: "Well, no; and really there seems to be considerable advantage in knowing all this. I thank you very

much. How well you understand things, Mr. Goodsense. I will take great care of the charts, and will have a talk with my papa upon the subject."

If we leave now the domain of home, and step forth into society, we shall find on every side abundant materials for proof of the utility of phrenology. Usefulness, we should remember, is not always apparent in a thing; it does not necessarily flow from it as a stream from its fountain. Some things are useful by being put to a use. Many valuable inventions are pronounced to be failures by some people for want of the faculty on their part to use them. Many remedies are unsuccessful because they are not rightly applied. There is a story told, you know, of a simple-minded woman who, being troubled with some pulmonary affection, was given a blister by her doctor, with instructions to place the same upon her chest; and, that this trustful creature, with the fullest confidence in her blister, placed it upon the chest by the side of her bed, and then told the medical gentleman the next day that she "didn't feel a bit better." This ignorant old woman is not a fiction, she is a living fact to-day; and many a one who has laughed at her stupidity has been chargeable with the same folly of expecting to reap the full benefits of a thing, whether it is rightly used or not. Such persons will go to a phrenologist, subject themselves to an examination, pay the fee, and bring their chart away with them; look it through once, put it away in a drawer—just as they would an insurance policy—forget its directions, and then go and say: "Yes; I've had my head examined; but I don't see the good of it."

The next exemplification of the utility of this science which we shall select relates to a period of life when, above all others, it is difficult to give advice, or to be of any service to the individual concerned, viz., in love matters. This epoch in the history of the human subject is characterized by an utter obliviousness to all danger, however much it may threaten; by a decisiveness of purpose which refuses to be turned aside; by a rashness which despises caution when most it needs it; and by a disposition to look upon all advice proffered as interference, if not impertinence. If, therefore, phrenology can be of use at such a time, it must be able to do more than the best of friends are often able to do. "Well," says one, "if phrenology can secure to us suitable unions and happy marriages, it must be almost another gospel." Stay! my good friend. Phrenology cannot *secure* anything for us; it cannot compel any one to listen to its advice and carry it out in practice. The human mind is not

to be put in order as you would a machine: the will must concur. I have heard it put by some as if it would be quite a feather in the cap of phrenology if it could make our young people observe the laws which govern a proper matrimonial selection. The thing is wholly absurd, as well as impossible.

The superior advantage of phrenological advice in these matters is this: It is based upon the teachings of laws which are written upon the physical constitutions of both the persons concerned—upon laws which declare themselves unmistakably, and which can be pointed out to the understanding as the sources of all differences of character and disposition. It is solely by rules deduced from these laws of character (which cannot here be particularised with advantage) that the phrenological adviser is guided. His is, therefore, sound, impartial, unprejudiced advice; and for that reason is more likely to be followed. And as a further advantage, and which is of scarcely less importance, if phrenology fails in preventing an unfortunate union, it has yet the resources wherewith to counsel the parties how to make the best of their mistake. This we challenge the wisest counsellor to accomplish without its aid. As a rule, “wise” and “friendly” counsel is objected to when it is proffered; and even when it is sought is seldom followed. But the real remedy against unsuitable matrimonial unions, and the only *efficacious* one, is to instruct our young men and maidens in a correct knowledge of the human passions, and those laws which govern their proper exercise and restraint. This can only be done upon phrenological principles. If our young people were thus trained and instructed into a more sensible and rational view of these relationships, and were well grounded in moral principle and religious duty, they would approach this love question with totally different ideas and feelings. Then, instead of the feelings overruling and overpowering the judgment, the judgment would hold its true place—that of regulating the feelings and directing them in the pursuit of their gratification. “Falling in love” would be as much an “episode” in life as ever; the grand difference would be that physical and moral fitnesses would be the paramount considerations. An individual thus enlightened could hardly “fall a victim” against the promptings of the higher faculties; but, under their guidance and sanction, to “fall in love” would be to be captivated by all that was worthy of the surrender; all that was highest and best within the soul would also approve the act, and thus heighten and intensify the delights of love, as well as ennoble and purify the passion itself.

Thus far we have assumed, for the most part, that the benefits and uses of phrenological science are obtained by consulting those who make that science their professional practice and study; and this is a great advantage; for without this means the great majority of men would be denied participation in the good phrenological truth offers. The special cultivation of this, like that of any other branch of science, by the few, enables them to impart to the many that instruction or advice which they would be either unable to obtain, or incapable of obtaining, for themselves. We have, therefore, with this fact in view, singled out the extremest cases to which the knowledge thus obtainable may be applied, with the belief that the greater includes the lesser; or, in other words, that a system that can deal so effectively with what are confessedly the most vexed questions in life may safely be trusted with those of less importance.

But the uses and advantages of phrenology are not merely second-hand, so to speak. Personal acquaintance with its facts and principles is of immense service to the individual, as the writer can testify after some years of private study of the subject. Not that in all cases it should be carried on as a study; comparatively few persons are able to do that, and still fewer are they who would be able to apply their knowledge, when gained, to the diagnosis of character in all its forms. What we mean is an elementary knowledge, such as is given of other sciences in our schools, as physiology, for example. This is practicable to any one of average intelligence, and accordingly hand-books have been published long ago with precisely this end in view. The more the public mind is informed upon it, the more will its rules be regarded, professional advice would be oftener sought, better understood, and more thoroughly carried out.

We have only space very briefly to touch upon one or two out of the numerous points of usefulness connected with this personal knowledge above described. First, in regard to the formation of individual opinion. How much this knowledge contributes towards what is called a sound view of things in general those only can say who have put it to the test. This is especially true in the case of leaders of thought-teachers and preachers. Many a sermon shows traces of this indebtedness in the ideas presented, although its author may not openly avow the fact, as the Rev. Henry Ward Beecher does. The principles of the politician, the policy of the statesman, the schemes of the social-reformer, the efforts of the philanthropist, and every other movement which has to do with human nature and character, must proceed upon *some*

theory or opinion ; and, furthermore, that theory or opinion must not be contrary to the established principles of human nature, if success is to be attained. The great want of the age is a science of man ; and the great study of our social scientists is to find one. But this, we confidently assert, they will not find until they study his cerebral organization as the origin of all character—mental, moral, and animal. Secondly, self-knowledge. Very few people really know themselves. Nothing reveals to us our weaknesses like phrenology ; it won't allow us to argue them down, nor charge them upon the devil, nor upon circumstances ; it puts its finger upon their immediate cause. Many persons judge themselves to possess certain qualities which they do not possess ; others, on the other hand, accuse themselves of grievous internal faults which exist only in the imagination. This knowledge tells you at once the bias of your mind, and wherein it meets adjustment, before you can take your thoughts as a guide. It helps you to analyse your motives, to trace feelings and experiences up to their real origin, and so unravels many a mystery that enshrouds the anxious spirit. It reveals the degrees (comparatively) of reponsibility by disclosing the capability by nature. That young man has not understood himself who thinks he can become a Hugh Miller because he is conscious of great powers of perseverance and ambition, and is interested in geology ; and that lecturer to young men is as much in the dark upon this point who holds up such geniuses as copy—models alike for all. Such a course must fail in its purpose ; it is based upon the erroneous assumption that success is mainly the result of exertion.

Again, in our relation to others, if you can read the main characteristics of men, you may the easier learn how to deal with them, and thus make fewer mistakes in your transactions. In ordinary intercourse what *not* to do is often as perplexing as what to do ; and quite an elementary knowledge of this science would often tell you what *not* to do. Of course, discretion is indispensable to a proper use of this knowledge ; but that does not make the knowledge itself of less importance and value. The estimates we form of others—friends or foes—are rarely just ones ; even with the advantage of a close personal acquaintance we are sometimes quite wrong. And because phrenological science reveals blemishes as well as favourable traits, is it to be deemed dangerous ? It is a libel, not on phrenology, but upon human nature, to say that this knowledge tends to harbour uncharitable feelings ; the direct opposite is the truth, because we see *why* men are as they are. But every truth is abused.

Once more. In forming friendships or alliances of any kind,—in partnerships, in compacts, in engaging of servants, making choice of confidential agents, or representatives in business matters, in dealing with customers or clients,—in all these, and such like things, this personal acquaintance with phrenology is like an additional pair of eyes. True, it will not impart wit and sense where these are lacking, nor will it, *de facto*, save you from taking a false step; but it will enable the sharp-sighted to see still further, and the man of tact and judgment to apply these gifts in a sure manner. And is this a small advantage? Is it better to go according to “impressions” in these matters, trusting to the chances being in our favour, or to use our reason and intelligence to discern the laws of character and to apply them in a rational way?

Finally, the most palpable and powerful evidence of the utility of phrenology lies in the fact of the extent to which it has been utilized. Whilst learned bigotry has turned away in supercilious disdain from so unscientific a theory, ordinary minds—untroubled with pre-occupations—have put it to the practical test. We may, perhaps, be allowed to say that phrenology has *lived* by being practically applied; it is in its application that it is known. If it is not useful, it is nothing at all; if it had not been useful it would have come to nothing years ago. A thing which is put forth for practical purposes, if it is inefficient, cannot be bolstered up by artifices; it is put to the test too often; we soon reject any invention which fails to do its work. Phrenology, as a matter of fact, has been made use of by all classes of men for more than half a century, and was never more believed in by the many than at the present moment. So, then, courting no favour, and fearing no opposition, we hold up to view the whole record of its work in the past, and point to what has been already accomplished, not fearing to stake the whole system of phrenology upon this one question of its utility.

ANOTHER HALF-HOUR WITH MY BEES.

IN the PHRENOLOGICAL MAGAZINE for May, 1883, I told your readers what could be seen in half-an-hour in a small apiary, promising on a future occasion to speak on one or two things not then described. The occasion has now arrived, and, as before, we pass into my back garden, just as a cry is raised that “the bees are swarming.” This is a

Saturday in May. The hive from which the swarm is issuing has evidently benefited by the food I gave it in the early spring. Feeding stimulates the mother. "Summer is coming!" the bees seem to think, for, food being plentiful, eggs are laid in great numbers. The prodigious increase of a hive in early spring necessitates a larger domicile, or rather a division of the bee colony. This necessity is greatest during hot weather, which causes over-populous hives to "swarm." The mother at last ventures forth with something like two-thirds of the colony, filling the air around the apiary with a mass of buzzing bees, surprisingly numerous. The bee music is heard by the neighbours, who come out to see what is the matter. One lady fears that "the world is coming to an end." She had never seen such a thing before. How the cloud of bees pour out of the hive, like vapour out of the spout of a tea-kettle! They fly about in the greatest excitement, many falling on the ground, or on us, over-weighted with the honey they have brought with them. Though we have no veil or gloves, we get no sting; swarming bees, having their honey-sac filled with food, are in no mood for making an attack on any one.

See how they cluster on the branch of that currant-tree! The cluster grows larger and the hum diminishes; evidently the queen has settled there; she goes no further at present. We invert an empty skep under them; they are 4 lbs. or 5 lbs. in weight. Lifting the branch suddenly upwards with a jerk, the bees fall into it like so many peas. Now I place the skep, with its mouth downwards, on a flat surface; and, when a little quieter, I throw the colony thus housed on the top of the frames of a frame-hive, covering the bees with a cloth. See how those that have fallen outside the hive climb up to the entrance and ventilate it.

The bees, excited as they are, generate much heat, and the day being hot ventilation is necessary. This is done by a number of bees standing on the flight-board; they hold firmly by it, and use their wings as in flight, driving a stream of air behind them. It is useful to fill the hive-frames with wax foundation. This helps the bees materially; it saves them much labour in comb-building, and much honey, as then much less wax has to be made. Wax is made from honey. Artificial comb foundation helps the bees to build straight comb where required. About a week's labour is saved by this help. The time saved is spent in storing. In the height of the honey season some bee-masters cage the queen, and prevent her from setting eggs, thus giving the bees less nursing to do and more time for the collection of

honey. The honey season lasts but five or six weeks, and should be made the most of. Help your bees in spring and they repay you in June.

I then substitute the quilt for the cloth, and place the roof on. I then level it with the spirit-level, so as to aid the bees in building the comb where and how I wish it, otherwise the bees would build it, according to their instinct, from the highest point downwards. How it will work the next few weeks! Many of the bees will wear themselves out by sheer fatigue. Bees live only a few weeks in summer, but as many months in winter. A bee hatched in spring is worn out by autumn; a bee hatched in autumn will live till the following summer. Queens are an exception; they live for three or four years.

Had the swarm we have just housed been the second from the same hive this summer its queen would have been a young one. The old queen always goes off with the first swarm; no egg-laying could have taken place for some days. We now see the use of the drones. These drones buzz about in large numbers. There is my little boy picking them off the flight-board; he likes to play with drones; they have no sting, and are harmless. He can readily tell them from the worker-bees by their appearance and size. The drones have a use; they are the male members of the society. After a young queen is installed mother of a hive she takes a journey for the purpose of meeting one of these drones. They meet during this hymeneal flight. She returns home, amidst a great commotion of the bees, a fertile mother. Her mate never returns; his amour has cost him his life.

But I hinted that I would make an artificial swarm of bees to illustrate modern methods. We will swarm an old skep and a frame-hive. This old skep I wish to break up. I think it may well give place to a frame-hive. If you will stand behind my right shoulder, and allow the sun to shine over my left, whilst I do this, we shall see what I look upon as an interesting sight. What a pity I haven't procured all the necessary appliances for the purpose! You see I want to drive the majority of the bees, with the queen, out of this hive, leaving those in the fields to replenish it with a sufficient number of nurses to attend upon the young brood till all are hatched—at the longest about twenty-one days for workers, and twenty-four for drones.

I wish I had a pair of suitable hooks to fasten an edge of this empty skep to the edge of the old one when I turn it up; they would hold it firmly, and at such an angle that I could see the bees march into the empty hive, and possibly

pick out the queen. I will ask Edith to hold this hive. Stand there; and when I turn up this empty hive hold it steadily, so that you don't shake the bees down after they have entered it. Observe, I pour a puff of smoke into the crowded hive. This frightens the bees; they fill themselves with honey ready for any emergency. Allow them a minute or two for this. Some of them, too late to get at the unsealed honey-cells, tear off the caps or lids from those that are sealed. They suck up sufficient honey for a journey and to start a new home with. They are very excitable, and try to ventilate the hive, setting up this loud humming sound. Blowing into them another puff of smoke to confuse them, I turn up the old hive, place it in the frame of a chair, after taking its hair-seat out. Edith puts her empty hive on the full one, edge to edge, but at an angle of about 60° , and holds it steadily. I beat the sides of the full or lower hive with my hands, but not so as to break the combs, for they lie in parallel lines between me and the empty hive; the bees run up to the empty hive for shelter. The lower hive, fixed in the framework of the chair, is drummed at till I see the queen, which you may look at and handle. I pick her up; she doesn't sting nor attempt to fly. See what a long body she has; how well behaved she is! Were she to sting she would run a risk of ruining her colony; the swarm would be queenless and die. She never uses her sting except in mortal combat with another queen. Being barbed they cannot extract it. The injury to a bee when its sting is torn away is fatal. It is a peculiarity that two queens never sting together; if they are in a position to do this they separate and begin a new attack till one has an advantage.

I place her amongst her children, crowding into the hive above. She proceeds on her journey, and is followed by a crowd of other bees, who march like an army, on and on. We have now got sufficient bees for our purpose in the new hive, and Edith, no doubt, will be glad to give it into my charge. I take it and turn its occupants out into a frame-hive, as I have just done with a natural swarm. You observe I had previously made some preparation by providing the hive with some comb foundation as a start. I had made guides of wax underneath the top bar of the frames for their help and encouragement. I shall give them a little syrup to-night to help them in their comb-making labours. An ounce of wax requires a pound of honey to produce it. It is elaborated in the body of the bee. In three weeks' time I shall take the remainder of the bees from this hive and give them a new home, with new wax foundation. By that time a young queen will be hatched.

Our half-hour is up, and yet we have not made a colony from a bar frame-hive. Can you afford another ten minutes? Yes! Well, we will divide a strong and over-crowded wooden hive containing combs in frames.

This hive is very crowded: we will swarm it. As before, we blow a puff or two of smoke into it, and take off the roof and quilt. I take out a frame; we cannot see the comb, the frame is thick with bees. I move my finger amongst the bees, and see many maggots (young brood) in the cells, and much honey. Those rounded convex covers on the cells denote that the occupants are young drones nearly hatched. Carefully examining the bees, we see no queen here. Replacing this frame, I take out another, and find more young bees, but no queen. I take the frames out and replace them one by one, moving my fingers amongst the crowd of bees to find the queen, but in vain. See how I sweat; the day is hot, and I am ready to give up the search. But no, I will try again. How the bees fly about! I get no sting. I will take out the frames for a second time; I persevere. Here, in the fourth frame, I find the insect wanted. Here she is. Do you see her? Yes. I place this frame, with bees and queen, into another new hive, and fill it up with empty frames. I move the frames into the old hive, closer together, and cover it up. It shall go a few yards from its old stand; the new hive goes in its place. It will soon be stocked with bees, returning with honey and pollen from the field; the queen will continue her work of egg-laying, and very soon it will be able to spare us a few frames of honey. The hive that has lost its queen will soon supply one in its place.

We haven't time to discuss this point just now. The young bees will hatch out in hundreds daily, and soon fill the foundation supplied it with neatly-built new comb; and the young queen in her turn will strengthen the colony with young bees, and by-and-by a useful hive, capable of supplying much honey, will be the result.

We haven't time to-day to speak of the honey harvest. I may say, generally, that the bees may be so worked as to fill frames of beautiful honey, which may be extracted from the comb into jars, or stored away in the comb till required.

J. WEBB.

FAITHFULNESS and constancy mean something else besides doing what is easiest and pleasantest to ourselves. They mean renouncing whatever is opposed to the reliance others have in us—whatever would cause misery to those whom the course of our lives has made dependent on us.—GEORGE ELIOT.

THE HYDEBOROUGH MYSTERY.
A TALE OF A GREAT CRIME.
BY CAVE NORTH.

CHAPTER XXIII.

RICE'S PERPLEXITY.

That same evening saw Fangast a visitor at "The Elms." For reasons not unconnected with his researches at Homcaster, he was in high spirits, and felt inclined to bring to an issue the little question between himself and Miss Softly. But for some time he saw no chance for the quiet *tête-à-tête* he so ardently desired, because Miss Goosey kept so persistently by her side. He was at length constrained to ask for a few words in private, and Letitia stepped on to the lawn, and walked with him beneath the elms.

The young man had by nature a glib tongue, and it was doubly eloquent where his own feelings were concerned; but he used that organ to little purpose to-night, albeit the soft moonlight and the balmy air of summer were conducive to tender thoughts. The truth is that, shrewd as he was, he had made a mistake this evening. Jacob had been exultant over the committal of Pennyfold, and his favourite had shown himself only too ready to share his feelings of triumph, thinking that the more the accused was blackened, the lower he would sink in Letitia's estimation. But he did not know through what tribulation the young lady's heart had recently passed on his account, and how their talk against the one she felt she had wronged grated upon her feelings, like the handling of a raw wound. The consequent soreness was beyond healing to-night, even though his words had been three times as honied, and his voice as liquid as the tones of the silveriest of bells.

When he began to talk of love, Letitia would have stopped him by saying, "Please don't talk on that subject to-night." But he told himself that the very earnestness of her manner indicated that now was his time, and so he would not be put off, but became more warm and pressing.

"Oh!" exclaimed Letitia at length, "if you knew how all this hurts me to-night, you would spare me!"

"But why to-night?" asked Fangast.

"I wonder you can ask me."

"Is it because of the—of your cousin?"

"And if it is?"

"It does your heart credit, Miss Softly," replied Fangast; "but is he, a malefactor, worthy of—?"

"He is no malefactor!" exclaimed Letitia, turning round upon him, with eyes that flashed like diamonds in the moonlight. "He is no more a malefactor than you or I—nor so much. Oh, you men!"

Her eyes overflowed with tears, and she covered them with her

hands. Fangast tried to console her, and for a few minutes she was softened. This, thought the young man, was his opportunity, and he again importuned her for an answer.

"If you want to win my gratitude and—and consideration," replied Letitia, calmly, "unravel this wretched mystery and set my cousin free. Until my cousin is free from this accusation, I cannot think of marriage."

"If I can effect this, will you be mine?" asked Fangast, in a softened manner.

"I cannot promise! I cannot promise! but the man who frees my cousin will be very near my heart!"

"You expect much, and give nothing in return," said Fangast, with a dissatisfied air.

"What would you have me do?—drive a bargain for my poor heart, that is almost broken?" returned Letitia, warmly. "I should have thought a man would have wanted to take it freely! Is there no generosity left? Do you not see that my cousin is wronged? That for him to have committed murder is as impossible as for a baby to kill its mother? and knowing this—and that he is most likely in the toils of some vile plotter—can you not, for the love of truth and right, move heaven and earth to get at the mystery? or is there no such chivalry left in the world? Oh, if there were such a one, he might win a woman's love indeed! But, no! one must barter away one's heart to get such a labour done!"

Fangast seemed ill at ease after this speech; however, he answered with the best grace he could assume: "Miss Softly, I will do my utmost for this young man, for your sake;" then, as Miss Goosey appeared at the open window, he led his companion in, and presently took his leave. How he proceeded to carry out his promise we shall presently see.

Here it is necessary to devote a few lines to the description of Mr. Rice's perplexities, which grew almost daily more aggravating.

It has already been said that the detective did not believe Drupe guilty of the murder. He did not believe him guilty—in the first place, because he could see no motive for the crime; in the second place, he knew that the first link in the chain of evidence was a false one, and it went against his professional instinct to see a false link made so much of. He would have produced his witness to its falsity but for the discredit it would have brought upon Fangast.

The latter and he had of late become more and more intimate, and there was now more than the bonds of mere friendship uniting them; for Rice, finding himself in straits for want of a little ready money, had had recourse to the auctioneer. Being, therefore, precluded from producing the deaf mute, Ben, to tell what he knew, he felt the more constrained to seek evidence in other directions to clear Pennyfold.

At this time chance aided his efforts. Happening to have business at the neighbouring town of Norton Wingate, and putting up at the "Lord Spendthrift," he found the landlord of that reputable

hostel to be no other than Radley, late butler to Mr. Softly, who, after the conflagration at Acacia Villa, had given up service, and invested his savings in the said inn; but what more surprised the detective was to find in the mistress of the establishment Miss Softly's former maid.

Radley was not naturally of the communicative sort, but Rice opened a way to his confidence by a well-chosen compliment. As the landlord and his young wife stood side by side, the former, observing the detective's eyes wander from one to the other, remarked that some people would not consider theirs a good match, being, as it appeared, a union of May and December.

"I should call it May and October, which is not a bad combination," Rice replied.

Mary smiled her thanks, which in her husband took the more substantial form of a prime bottle of wine.

Over the wine Rice introduced the subject that was uppermost in his mind, and drew the couple on to tell all they knew. He did not get much from Radley; indeed, considering he had been in Mr. Softly's service for a period of ten years or more, he thought him singularly ignorant of the family affairs—in comparison, that is, with what he had discovered in the below-stairs region of other houses.

The only item of information he obtained of any moment, as it appeared to the detective, was the fact that Jacob's wife, on relinquishing her daughter to Mr. Softly, had married again, and was, he believed, still living in Homcaster. Radley had heard that she was rather a bad case, but he knew nothing positive about her; anyway, since the marriage there had been no communication between the two families.

Rice thought it might be well to hunt up these people; but to what end he could hardly say, except on the principle that a baffled dog runs wildly to recover his lost scent.

In the course of their conversation, the innkeeper brought up an old theory of his—namely, that Mr. Softly had always had a "screw a bit loose," and that he had done away with himself in a fit of insanity.

The detective's pertinent question, "But what has become of his body?" caused the ex-butler to shake his head without appearing to unsettle his conviction.

"I could better understand your theory," said Mr. Rice, "if you had said he had gone off in a fit of insanity; but even then we are met by a difficulty, for there is no one like your madman for putting himself in evidence."

From Mary he learned one thing that he had not gathered from her when he had questioned her immediately after the occurrence, and that he considered of great importance; it was, that young Drupe's love for Letitia was discountenanced by Mr. Softly, and that Pennyfold knew it. He also gathered the additional information that she had been instructed to keep the secret to herself, which up to the present she had done.

Mary, seeing the importance the detective attached to the informa-

tion, hoped she had not been indiscreet and told anything that would injure Mr. Drupe. Price reassured her, saying he had the young man's interest at heart, and that he would free him if anybody could; an assertion which greatly comforted Mary, who had a sneaking fondness for the clever young chemist.

"Did the young muff kill his uncle after all, because he was opposed to his marriage with his niece?"

Such was the question Mr. Rice put to himself again and again that night after May and October had left him to his own lucubrations. But, he reasoned, if Mr. Softly's hostility to his marriage was a possible motive for a murder in the case of Drupe, was it not still more so in the case of Fangast? If murder had been done, it would seem to lie between these two; but which was the guilty party? After turning the question over in his mind, the detective came to the conclusion that the probabilities of the case pointed to Fangast rather than to Drupe; for, of course, he did not attach much importance to his friend's declaration that he knew nothing whatever about Mr. Softly's disappearance; and besides, something in Jerome's manner had piqued him.

For one thing, he had been several times out of town, and when questioned about his journeys, he had answered less frankly than usual; he had been to London on business—that was all. What, queried Rice, could take him to London so often? or was "to London on business" simply a blind. He determined to find out.

Chance again aided him, as chance invariably aids those who wed diligence to intelligence. He called one evening after business hours to see Fangast. Mrs. Gridley, the housekeeper, said he was not at home; he had gone by the six o'clock train to London.

"To London again!" Rice mentally ejaculated. Then to the housekeeper: "He must have important business in London to take him there so often."

"I don't think he has been every time to London," replied Mrs. Gridley; "leastways, when he came home last time, his valise had a Homcaster ticket on it."

"To Homcaster!" mused the detective, as he walked homewards; "that is where Mrs. Thumkin, Jacob's one-time wife, resides; is there anything in that I wonder?"

After some deliberation, Rice thought there might be. So next day he went down to Mugbridge Junction, and watched who came by the northern trains, and who by the southern. He saw no Fangast; but he saw some one else alight from the northern trains whose apparition rather surprised him—it was Jacob Softly.

On inquiry of the ticket-collector he found that Jacob had given up a Homcaster ticket. He learned further that Jacob had been much from home of late.

"These two," said Rice, "are as thick as thieves; both are a good deal away, and have been to Homcaster; there's something in all this."

He resolved to pay Homcaster a visit, and hunt up the Thumkins;

it was the last hope he had of unravelling the mystery. Nor was there any time to lose; the assizes falling in three weeks time. Hunting up the Thumkins in a large town like Homcaster was like looking for the proverbial needle in the proverbial bottle of hay; but no search of the kind is hopeless to those who know how to go about it systematically. Two days passed without his making any appreciable headway, but he did not lose heart; he only reflected that there was so much less ground to cover. He had learned from Radley that Thumkin had been supposed to be a waiter; Rice had accordingly made inquiries at all the chief hotels and eating-houses for a man of that name, but in vain. He next bethought him to make inquiries about the Softlys; he made more speed in this direction, finally dropping upon an old woman who remembered both Jacob and his brother William. The former, she said, had turned play-actor and deserted his wife, who, on the report of his having died abroad, married again.

“Was she still living?”

She believed so; but it would be easy to make sure, because her husband was “chucker-out” at the London Music-Hall; and a rare one he was at the job, being so big and thick-set (added the old crone).

That night Rice had the satisfaction of setting eyes upon the redoubtable Thumkin; he found the doughty “chucker-out” every whit equal to his reputation; he pervaded the music-hall like the smell of its tobacco; and the eyes of the young jackals and hyænas of the place were upon him as upon an avenging providence.

When the “London” was closed, Rice tracked the giant to his lair, and then retired to his inn to devise a plan whereby to spy upon his wife Martha.

The next morning saw him arrayed in a long, dilapidated grey coat and a felt hat to match, with a pale tow-coloured patch of hair stuck on his upper lip, therewith hiding his clean-cut lip and decisive mouth, and in addition with bushy, hirsute appendages of the same tint covering his eyebrows. Never was the visnomy of a man more metamorphosed. Then, having hung about his neck a tray containing various little odds and ends of vanities for which the female heart is never without a weakness, he presented himself successively at every door of the house in which Thumkin had his abode.

It was what is called a “Model Dwelling”; and well so, for it was a model of everything that was detestable in domestic architecture. The apartments under the one roof were numbered by the score; children were on the stairs by the dozen; and where there were not children there were muling cats and barking dogs. Everywhere there was a mixed reek of the cuisine, the washhouse, the overloaded bed-room, and a thousand things besides. On the first landing Rice hesitated; the air seemed to grow thick, and the lighting was so bad that it was groping work at mid-day.

However, plucking up courage, he managed to reach the fourth floor, where the Thumkins had their apartments, and knocked. A stout, healthy-looking woman made her appearance, and declined to

have any dealings with the pretended pedlar ; neither his wares nor his gossip interested her, and he was about to turn reluctantly away, when another ruse suggested itself to his mind.

“I have nothing good enough to tempt you, ma’am, but I have had neither bite nor sup to-day, and if you could find in your heart to give me a morsel, you might choose anything I have got.”

Martha (for it was she) gave him a sharp look, and then, saying, “Wait a bit,” went in, and immediately brought him a lump of bread and cheese.

Rice had been out all the morning, and was hungry enough to begin putting the morsel out of sight ; and as he leaned against the jamb of the door to do so, the housewife was obliged to stand with the door in her hand, and watch him till he should have finished. Before he had done, Martha found herself so deeply interested in his wares and his talk that she invited him to sit down and rest himself a few minutes.

When he finally quitted the house, the detective had learned all about Martha’s life with Jacob Softly—his desertion of her, and her subsequent marriage with Thumkin ; she, however, said nothing about Jacob being still in the land of the living. Rice had tried to draw her on the point, but she disclaimed all knowledge of her relations on her first husband’s side ; though she spoke on the subject so reluctantly that he thought she was prevaricating.

Rice went away, feeling that he had only partially succeeded in his task, and casting about in his mind for a plan to carry his investigations further. Putting together Martha’s indisposition to talk about her former husband, and Jacob’s frequent absences from home, he asked himself, “Could he be visiting her ?”

Still thinking this question over in his mind, the detective found himself walking in the direction of the “Model” after nightfall. It was a wet, dismal night, with a thick fog hanging like a wet blanket over everything. He walked to and fro in front of the barrack-like building for some time. He had come out without any definite aim, and he walked aimlessly—just to think ; finally, feeling cold and wet, he turned to go to his inn, and was passing the entrance when there brushed past him, coming out, the muffled figure of a man. The form and gait seemed familiar to him ; but before he could take a second look the man was lost in the fog. Rice made an attempt to follow him, but in vain : one might have been forgiven for losing his salvation in such a fog.

Next morning Rice returned to the house, determined to find out something, but when he reached the fourth floor he found the birds flown ; the Thumkins had flitted that morning he was told by the neighbours.

CHAPTER XXIV.

THE MENDICANT.

When Jerome Fangast arrived at Homcaster, the second day after driving Letitia’s mother to Catchford Station, he lost no time in finding out the residence of the Thumkins and proceeding to the

development of the scheme that had shaped itself in his mind, albeit not very clearly in some of the details.

It was already night when he reached Homcaster, and when, in company with Martha, who acted as guide, he set out for the Old Bridge, in order to take a look at the venerable mendicant, it was between ten and eleven o'clock. The day had been wet and boisterous, and fitful gusts of wind still blew down and across the muddy streets, driving the clinging moisture in spray into the faces of wayfarers, and causing them to press down their hats and fold closer their wraps.

They had not far to go, but it was necessary to hurry for fear the old man should have left his post ere they reached the bridge. When they arrived at the open space flanking the river, which bounded the street for some distance, Martha exclaimed: "He is gone!" and surely enough there was no one to be seen.

As they descended the street they had the river and the bridge on the left, and the dark mass of an old church, overtopping some low market buildings, on the right. Beyond, in the darkness, the sky-line appeared to be broken by a high railway bridge or viaduct.

Viewed as at present the picture was an interesting and striking one, and Fangast's curiosity was piqued to view it nearer; although his companion urged that they should return.

The wind howled about the Old Church tower, as though angry at it for standing there so long resisting its course; and the river, in flood, moaned dolefully as it hurried along its narrow channel. Fangast was struck by the volume of sound and moved towards the parapet that here ran along one side of the street. They had only gone a few paces when Martha, pulling Fangast's cloak, said in an undertone—

"See, there he is!"

"Where? Who?" exclaimed the other, looking in the direction she pointed.

"The old beggar!"

"I see no one," Fangast returned.

"Just within the bridge, sheltering himself against the pillar," whispered Martha.

Fangast now caught sight of a bent figure, huddled in rags, standing within the shadow of the end of the bridge, beneath a pillar that carried a flickering lamp on its summit.

The two went towards him, and Fangast, taking out a coin, proffered it. The old man extended his hand and took it, making a profound bow in return, and murmuring some words of thanks. While he was doing so the young man scanned his face, and though the light was dim, he thought he recognised the features of the sometime magistrate of Hydeborough.

After passing on a few paces he turned back, and, addressing the mendicant, said—

"Why do you stay out in such inclement weather? Have you no friends?"

"It is the will of God," the beggar replied.

And though Fangast put several other questions to him, he still replied: "It is the will of God." As they were walking away Fangast said: "I hardly knew him again with that hoarse voice and haggard face."

"Then you do recognise him?" asked Martha.

"I am not sure; but it looks like him."

In his own mind the auctioneer had not a shadow of a doubt; but it suited his purpose to pretend to be uncertain. On their way back to the Model Lodgings he had little to say; and, after being presented to the redoubtable "Chucker-out," he speedily took his leave, promising to see Martha again in the morning.

However, in the morning he deemed it advisable not to be seen during the day about "Todd's Ideal," as he learned the barracks in which the Thumkins resided were facetiously called, and accordingly sent a message to Martha, asking her to meet him at a certain tavern near the Old Bridge. Martha met him as desired; and the first question she asked was—

"Have you seen him again?"

Fangast said he had, but that he was still uncertain about his identity. It was still early in the day, and the tavern as yet had few customers; so that the two plotters had the little sanded parlour entirely to themselves. The chief conspirator lost no time in putting his scheme before his companion.

The scheme, so far as he had thought it out, was this. Fangast, who had previously informed Martha of his intentions and expectations in regard to her daughter, now told her that Letitia was her uncle's heir; but that should William Softly return, there was no telling what might happen. Jacob, before his brother's disappearance, had been getting more and more influence over him; he had prevailed on him to make over to him a certain amount of house property; and, according to his own statement, William had promised to alter his will in his favour.

"Now," said Fangast, "you know what Jacob Softly is: if he gets hold of his brother's money he will make it go like water, and nobody will benefit by it besides himself; and in the old man's present condition he would worm it out of him in a very short time. But, even if protected from undue influence, the old man's money would still be tied up so that others could not benefit by it." It was therefore, he concluded, to everybody's advantage that matters should remain as they were: in other words, that William Softly (if the beggar should prove to be he) should be prevented from returning.

Fangast did not fail to play upon Martha's resentment towards her first husband; and he found in it a most potent ally. Martha deeply resented Jacob Softly's return to life, and his comfortable installation at Hydeborough, when it had been conveniently supposed, and earnestly hoped, that he was underground. If there had been a chance of Jacob's becoming rich, and of Martha's returning to share his wealth with him, there might have been danger in showing the

possibility to the sometime wife ; but apart from the fact that she knew that there was so little stability in Jacob's affection that he would tire of any woman in a month, Martha was devotedly attached to her good-natured giant, with whom, though poor enough, she was comfortable. She was therefore well disposed to fall in with Jerome's plan for the very handsome consideration he had to offer ; but she was careful to stipulate that Thumkin too should know of it, and give his approval, before she moved in the matter.

Thumkin, who had just enough of what is called moral sense to know that he must not steal other men's money or goods, or do anything else that he might, if found out, be punished for, was not honest enough to see, or to care to inquire, how much moral wrong there might be in aiding and abetting a plot to prevent a man from returning to his family, for his own or others' benefit : so, lured by the harvest of gold, and the promise of more, he fell an easy prey to his wife's and Fangast's persuasions.

This little matter arranged, Thumkin and Martha left in good spirits. Fangast returned to Hydeborough well satisfied with what he had done. His satisfaction, however, was of short duration. As we know, it was at this juncture that he made his proposal to Letitia, and received the reply that she would not think of marriage until Pennyfold were free. If he could have obtained her promise he would have at once discovered the lost Mayor. But the emotion she displayed frightened him, and deeply incensed him to boot, because, he persuaded himself, she was more in love with Drupe than ever.

Added to this chagrin, consequent on the ill-success of his suit, the auctioneer began to fear that the secret of the ex-mayor's whereabouts might be discovered. Martha had found him out ; why not others ? Rice, for example ? The detective's keenness and persistence he knew were such that it seemed impossible but sooner or later he would trace the old man. And so, brooding over the fear of discovery, he began to cast about how to make doubly sure of his victim.

The problem was not an easy one, short of doing violence to the old mendicant ; and that for moral as well as for other reasons he did not wish to resort to ; although whenever his mind reverted to the subject, the vision of his first night in Homcaster arose before him—the dark, silent street, the lonely bridge, and the black-flooded river moaning beneath. Tossed into that flood who would see him more ? and how easy to do it ! But the young man ever turned from the suggestion as one only fit for the unskilful ; his art must be superior to that. After some days' consideration he came to the conclusion that by some means or other the old man must be got into the power of Thumkin and his wife ; but how that was to be effected he could not at present make out.

However, full of this idea, he made another journey to Homcaster. Arriving late at night, he lost no time in proceeding to the Old Bridge ; and, seeing the mendicant still at his post, walked to and

fro under the shadow of the Old Church. It struck eleven a few minutes after he began his sentinel duty. The quarter, the half-hour, and then the three-quarters chimed from the tower, and still he went to and fro, hardly for a moment withdrawing his eyes from the old man. Then twelve sounded; his attention was arrested by the solemn tones; he counted each knell, which seemed to be borne away bodily upon the wind, and was far away ere its successor sounded; then, as the last one died away in the far distance, he turned again towards the bridge—to find the object of his vigil gone!

Jerome hurried up and down the street and over the bridge, but discovered nowhere any trace of the mendicant.

So his journey for this time had been in vain, as he could not stop another day, and he was not inclined to trust his present task to any one else. A week passed before he was able to pay Homcaster another visit: then he was more successful; he watched as usual, and with the first stroke of twelve he saw the aged beggar put on his hat and totter away. Fangast followed him across the bridge and along two or three streets; each successive street becoming narrower and more dismal, until the old man entered a small court. Fangast hesitated a moment before following him, but finally took the plunge, keeping to the darker side—if one side could be said to be darker than the other, where all was so black—so as not to be seen, and had the satisfaction of seeing the mendicant enter the last house on the right. Placing his ear close to the door, he heard the old man's feeble feet climb step by step to the top of the house; then, from the other side of the court, saw a feeble light glimmer at a small garret window, and murmured to himself: "Under the roof; that's where the old fellow beds."

He made as close a survey of the court as the darkness would permit, and then retraced his steps. It was a dismal place; there was hardly enough room in the strip of sky above for the simultaneous evolutions of three several stars.

It was close upon two o'clock when the auctioneer finally laid his head upon his pillow. Later in the day he paid another visit to the court—Finkel Alley, as it was called—he wanted to see it by as much daylight as could be got into it. Day did not lend any enchantment to the scene; on the contrary, it bared its ghastly misery and deformity. Ragged and dirty children there were in plenty, and slatternly women; scarcely a house had its windows whole; the interiors were as black and disgraceful as the exteriors squallid; from house to house stretched clothes-lines, on which rags fluttered in the wind; one tenement was only kept from falling by a beam across the court; and a cat upon the middle of it was contemplating the misery below, and enjoying the only approach to fresh air there was about the place. Yet, amid all the dismalness and gloom, there was one thing that sent a thrill of joy to Fangast's heart. In the window of the house which the old man had entered there was a bit of dirty paper intimating that it contained an unfurnished room to let; and from a casual inspection from the outside he

fancied it must be immediately below the mendicant's lodging. Fangast's mind was instantly filled with a vision of how effectually to place the old man beyond all fear of discovery; and before he again quitted Homcaster he had arranged everything to his satisfaction.

CHAPTER XXV.

THE OLD BEGGAR CARRIED OFF.

It was a trying time for Mr. Rice. He had business at Hydeborough that would not bear putting off, and yet he felt so sure that there was something in Jacob's visit to Homcaster and the hasty removal of the Thumkins, that it went sorely against the grain to leave what he considered to be a valuable clue to some one else. However, he had an able lieutenant in the town, and to him he entrusted the task of picking up the thread so rudely broken.

But the fact that the detective had confidence in his colleague's diligence and shrewdness did not tend greatly to his ease of mind. He was a man of irritable temper, and he had had so many crosses of late that he was not in the most amiable of humours. In spite of his friendship for Fangast he was considerably incensed against him, because, as he imagined, he had led him a wild-goose chase. It was no fault of Fangast's certainly—a fact that he recognised, but that, nevertheless, did not lessen his irritation. When temper and feeling intervene even the most reasonable cannot be always reasonable.

It had occurred to him once to confide his secret to Fangast, being convinced that he had made a mistake in connecting that hero with his suspicions; but when he called at his house he found him not at home; and this delay giving him time for further consideration, he on these second thoughts decided that for the present he would still keep the matter to himself. Whether, on the whole, these second thoughts were the best will probably appear in the sequel.

His efforts thus far had been unavailing to discover whither the Thumkins had gone; the "Chucker-out" having as suddenly quitted his employ as his abode. His endeavours to find out Jacob's intention in going to Homcaster had been equally void of result; nor could he discover that he had been there more than once. The whole affair was perplexing and tantalising in the extreme; it seemed as though the further he pushed his inquiries the deeper became the mystery: perhaps, after all, it would prove to be one of those inscrutable puzzles of which our modern life, with all its agencies of detection and publicity, is so full.

While Rice was indulging in these perplexing doubts, Ferret, his agent at Homcaster, sent him word that he had traced the Thumkins to a low place on the other side of the river, called Finkel Alley; that in the same house in which they went to lodge there was living an old man who agreed with the description of the missing ex-mayor; but that suddenly, just before he found out their whereabouts, both they and the old man had decamped—no one knew

whither. The detective lost no time in going down to Homcaster to follow out the clue so opportunely discovered by his agent.

Ferret explained to him what he had done, and took him to the house in Finkel Alley, whither he had traced the Thumkins, and where, for his own satisfaction, he made such inquiries as led him to be almost certain that the mendicant was no other than William Softly. But, as showing how unobservant people commonly are, and how a man may for half a life-time be unknown by his neighbours, it is curious to relate that the people who kept the house and let the lodgings had noticed no traits of superiority—be it in manner, speech, habits, form, or feature—in their lodger, but saw in him simply the ordinary mendicant he presumed to be, plus an unusual predeliction for praying, which he indulged in, not always to their comfort or edification, night and morning—a peculiarity they attributed to his not being “all there.” Rice learned also from these people that the “Beggar of the Old Bridge” (whom they knew by no other name) had been visited once or twice by a gentleman with a wig, who pretended to be a Bible-reader, but who, they had learned, was nothing of the sort.

“Jacob,” said the detective to himself; “I was right after all. If he is not the deepest old reprobate——!”

From Finkel Alley Rice and Ferret proceeded to the Old Bridge; Rice had a strong wish to see the spot where the old man had held forth the hand of want and bared his white head to all the winds. When about the middle of the bridge they saw a crowd at the other end of it, about the spot where the mendicant used to stand. On approaching a little nearer they perceived by unmistakable vocal signs that there was a Punch-and-Judy show on the spot; and of course they must stop to look: what person, native or other, could do otherwise? Beholding them standing there, on the edge of the crowd, amused like the rest, the showman presently approached them, rattling his money-box: he was a medium-sized man, with a tanned face, a battered white hat, and a loud blue neckerchief. Rice looked at him and started: the showman laughed, and exclaimed—

“Hullo! How d’y’ do, Mr. Rice?”

“O, well!” replied the detective, assuming his most nonchalant tone. “How do you find yourself, Mr. Jacob?”

“Jolly, thanks; didn’t expect to see you here, tho’,” replied our friend Jacob—for it was he.

“Nor did I expect to meet you here with this fakement,” returned the detective.

“Suppose not: come and take a drink?” Jacob answered.

The detective assented, thinking that the best thing they could do under the circumstances; and presently all three were seated in the tavern that we know over the way, and Mr. Rice was wondering how he could best get the wily Jacob to commit himself. Accordingly, after they had been served with their respective drinks and had pledged each other, the following colloquy took place—

Rice : "How long have you had this fake on?"

Jacob : "O, a goodish while."

Rice : "What's the notion?"

Jacob : "O, just to keep my hand in like."

Rice : "How long have you been here?"

Jacob : "Only came yesterday; met my fellows here; they've been doing the country side"

Rice : "Oddish sort of a job, isn't it?"

Jacob : "What's the odds so long's your happy? I never was much of a stay-at-home bird. But what brings you down here? Business?"

Rice : "Well, yes; fact is, I heard your brother had been seen hereabouts, and I came over to hunt him up; but I find someone's been before me—bird's flown. Seen anything of him?"

Jacob started so at this broadside that he upset his glass and spilled the liquor on his knee. "My brother!" he exclaimed. "Here! gone! Why—haven't they got Drupe for murdering him? How can—?"

The showman looked scared, and for a moment or two the detective seemed incredulous; then, assuming a graver attitude, the latter said: "Come, old man; don't try to put it on with me; you know you've seen your brother here, and you've helped to get him out of the way."

Jacob stood like one struck with a sudden fright; his little piggish eyes seemed to be half-starting from their sockets, and his hands struck out aimlessly, as they might in the dark; then, pulling at the locks that thatched his bewildered pate, he gasped out—

"Do you mean to say that I have helped to put William out of the way—my brother William? If you do, you lie!"

"Come! gently!" expostulated the detective.

"If you say that, you lie!" Jacob repeated, hotly.

Rice tried to quieten the excited showman; but in vain. Jacob put on his hat and prepared to go; but, before doing so, he so far recovered his equanimity as to make the detective a profound bow, and tell him that he was going to return instantly to Hydeborough, where he would know where to find him if he wanted him. Thus he left them.

Rice set Ferret to watch him, to see if he really did take the train to Hydeborough. Subsequently Ferret reported that he had seen Jacob leave by the train for the south, and take his head showman with him. The other man, the one who operated on the big drum, stayed behind, his home being in Homcaster; and from him Ferret learned that Jacob had avowed, when he purchased the Punch-and-Judy show, that his intention was to travel the country with it in search of his brother; but more than that the drummer did not know.

Upon hearing this Mr. Rice expressed the opinion that, in spite of Jacob Softly's well simulated surprise and indignation, he had tracked his brother, and been instrumental in getting him out of the way. The next day he was back in Hydeborough; no further clue as to the whereabouts of the Thumkins having been discoverable: he

had, however, left strict injunctions with Ferret to telegraph to him the instant he obtained any further information. In Hydeborough he learned that Jacob had called upon the chief-constable, explained the charge that Rice had made against him, and told him where he could be found if wanted. Mr. Farrel, having one man under committal for doing away with Mr. William Softly, for obvious reasons did not want to be bothered with a second, and so ridiculed the detective's notion that the missing man was still alive.

His friend Fangast, for equally good reasons, laughed down the idea. At the same time, he found it no laughing matter to learn that Rice had been so close upon the trail, and that, but for his determination to put him more effectually out of the way, the old man would have been discovered: it made him go alternately hot and cold to think how near had been his escape.

Day after day passed by without bringing anything further from Ferret, and Mr. Rice began to doubt again whether the whole thing was not a delusion. Yet so sure was he in his own mind of young Drupe's innocence that he could not be satisfied to leave his case with a jury of his townsmen, although he felt that no intelligent twelve could find him guilty on the evidence to be laid before them; even though, as he understood, the truth had come out about his knowledge of his uncle's disapproval of a marriage betwixt him and Miss Softly.

As week after week passed by, away from the world and the life he had been used to, debarred from all his wonted pursuits and occupations, and with little but his own thoughts to keep him company, Pennyfold fell into a half hopeless, moody, and wholly indifferent state of mind. He had hoped and hoped that a message would come to him from Letitia; but nothing reached him beyond the few cold words of sympathy brought to him by John Henry Gander, who never failed to take every possible opportunity of communicating with him and bringing him every feasible drop of comfort. Besides him and Marshall, and his solicitor, he saw but few from the outside world. He was like one forgotten—forgotten too by the one he loved best of the whole world; and misjudged by the one whom he loved next to her—his mother.

As regards his relation to Letitia, Mr. Gander had been an unfortunate intermediary. He had conceived an unjust idea of the young lady, partly from her treatment of his friend and partly in consequence of her conduct towards Fangast—his sworn enemy. He believed that any woman who could show the slightest regard for him must thereby be convicted of the most deliberate frivolity. No wonder therefore that he thought, when Letitia entrusted him with a kindly message to her cousin, that she was perpetrating another act of heartless cruelty; and that, not wishing to raise any false hopes in his friend's breast, he deprived the message of its heart of grace.

John Henry had a theory that all beautiful women were heartless. The exact date of the evolution of this idea in his mind is not cer-

tain ; but it probably coincided with the bestowal of his affections on Miss Goosey, who was neither fair nor beautiful ; albeit of as good a heart as is commonly to be found among Eve's daughters. The guess is the more likely because the theory in a measure justified him in the object of his choice. Perhaps it was unfortunate that the theory led him into committing an injustice to another, but that is sometimes unavoidable ; it being in the nature of theories to be weak in some one point at least.

Besides the indifference, as he considered it, manifested by Letitia, Pennyfold was greatly troubled by his mother's belief in his guilt. She had visited him several times, and had adjured him, as he prized his salvation, to confess his guilt ; and nothing that he could say was of any avail to move her from her belief ; on the contrary, she went away each time more convinced than ever of the depravity of his heart.

The good matron had a very austere code of morals. According to her Calvinistic view of things, the man or woman who once swerved from the strict path of rectitude was lost, unless rescued by a "saving grace." The one act of secrecy that her son had committed in keeping from her the knowledge of his attachment to Letitia, which was magnified to an act of depravity, had speedily led to others, until the crime of murder had been the result. There may have been some resentment in her pious judgment, because he had gone to seek a bride in the house of the enemy—in the house of her who, she believed, had first wronged her, and then for years systematically neglected her.

So everybody was rendered very wretched by this troubled outcome of things. But saddest of all was the soft-eyed Agnes. Between her and Mrs. Drupe a coldness had arisen, because she remained true to her belief in her favourite's innocence, despite all the theories of the first sin, and the blighting and withering influence of unregenerate beauty, about which her mistress and friend was never tired of preaching.

But Agnes had still other causes of trouble. In the first place, deaf and dumb Ben had of late been for ever coming to her and making signs that she could not understand, but which, from their constant reference to a glove, only served to remind her of the sad condition of her beloved cousin.

Then Blagster, the old game-keeper, was dying, and he was constantly sending Bridget for her—Bridget, who, since his daughter Maude left him two years ago, had done what little was needed to keep his house in order. It was little that Agnes could do for the old man ; but she had always been a favourite with him ; and it seemed to be a comfort to him to see her about the house. There are women whose gentle dove-like eyes beam forth a kind of ethereal influence, and the touch of whose hands is manna and medicine at once ; around their whole being breathes a halo of love and sympathy, that supplies the one thing needful to make of home a paradise : such a one was Agnes !

Blagster had not been a favourite in the neighbourhood, being of a silent, reserved disposition, and little inclined to general company. His wife had not been a pattern of the domestic virtues, and that is enough to take the sweetness out of any but an angel: she had proved an over-indulgent parent; and to that fault he had attributed the circumstance of his two sons having gone wrong. There were not wanting those who laid the fault equally at his own door, averring that he had driven his lads from home by his severity. When his daughter Maude left him, however, the majority of those who had blamed his austerity in regard to his sons sided with him as against the girl, asserting that the almost idolatrous fondness of the old man had been ill-bestowed on one who had neither heart nor grace, but only that frail beauty that goes no deeper than the skin.

The desertion of the latter had almost proved his death-blow; he had never looked up since; and for two years he had been visibly withering, like a tree of the forest whose heart has been blasted by lightning.

And so on the whole Agnes had a sorrowful time.

(To be continued.)

Poetry.

THE LAND OF PLENTY-TO-EAT.*

Plenty to eat! Plenty to eat!
 I've been in the land where there's plenty to eat!
 Nussy, sit up, and very still keep,
 And I'll tell you what sweet things I've seen in my sleep.

'Twas a beautiful place: there was grass; there were trees
 That swayed to and fro in the whispering breeze;
 There were birds; there were flowers, so lovely and fair,
 And the fragrance they shed was a joy in the air;
 And the birds sang so sweetly—the thrush in the cage,
 That sang at our street-end its pain to assuage—
 Not half so entrancing as those that you greet
 Everywhere in that land where there's plenty to eat.

And so large is that land! and so gentle the folk!
 So joyful their laughter—so pleasant their talk!
 They never get old, and they never grow gray:
 I really believe they are children alway:
 No school-ma'am to scold them, no p'liceman to frown,
 As he does when we look through the rails in the town,
 Where the rich people play at their games on the grass
 Till the watchman has lighted the stars and the gas.
 No, nothing at all but just play all the day—

* Suggested by a paragraph in the Daily Papers.

Play house and play school, play, sing, and e'en pray—
That, oh, but the time is so pleasant and fleet
In that beautiful land where there's plenty to eat !

I stood quite apart, and I held down my head ;
I thought they might drive me away ; but, instead,
They welcomed me all with such joy and delight
I soon was at home in that country—quite.
They asked me what made me so thin and so pale,
And I told them, dear Nussy, our sorrowful tale :
How father had died, and mother—so weak—
Had toiled and toiled our living to seek ;
How we often went bare, and hungry oft,
And how mamma grew thinner and paler, and coughed ;
And we had no fire, and we had no bread,
And at last mamma lay on the hearthstone dead,
And they brought us here.—I had oft to repeat
My story to those who have plenty to eat.

They hardly believed such a land there could be,
And some of them wanted that country to see ;
For they said it must sure be a heathenish place
That had never known aught of God's mercy or grace ;
And their eyes filled with tears whenever I told
How people with us die of hunger and cold.
Don't they know, one would ask, that God has made all,
And that without Him no grass-blade so small,
No kernel of nut, no ear of corn,
Can ever the fields and the hedgerows adorn ?
His moistening dew, His kindling sun—
Without them man's labour is vainly begun.
At least, so they think—all those whom you meet—
In that beautiful land where there's plenty to eat !

But one little mite threw his head in the air—
(Oh, such clustering locks 'bout a forehead so fair
Had he, that not many could with him compare !)—
And his sunny brown eyes flashed indignant as there
He stood with his little hand lifted on high,
And he cried with a voice that made echo reply !
“ Let us go in our thousands and conquer this land,
And put to the sword this tyrannous band
That with plenty to eat let little ones die
Of hunger and cold ! ” And many cried “ Aye,
Let us go ! let us go ! ” And I thought they would come,
With horses and cannon, and trumpet and drum,
And decapitate those
Who never wear aught but go-to-church clothes.

But a bright little maiden with cherry-round mouth—
She might p'rhaps have been of ten summers' growth—

Stepped forward and said : “ No, let us go forth,
In legions and legions, to east, west, and north,
And teach these poor heathens the Word of the Lord ;
'Twere better by far than them put to the sword.

Let us teach them—'tis plain they are not without mind
If this little maiden is one of their kind—
That doctors should cure when poor people cough,
And the earth is the Lord's and the fulness thereof.

We would make to them known
That the crown

Of manhood is ever the young's part to take,
And the force of misfortune or misery break.
They will not discredit our teaching an hour ;
The rich will pour out all their wealth in a shower,
And from east, west, and north
One cry will go forth,

The hunger-pain now is unknown in the earth ! ”

Then the others agreed to this plan with acclaim,
And bands were enlisted with leaders of name,
And rules were indited our legions to guide,
And we bound our bright badges upon us with pride :
For I must be one of that wonderful band
Going forth to conquer with blessings this land—
And a thrill of delight ran all through my heart
As I thought of the joy we were going to impart,
And the suffering stay,
And the tears wipe away

Of children, and mothers who work to get bread,
And working and starving, fall helpless and dead.

Then, as I looked round on our beauteous hosts,
I thought, dear, of you,
And hither I flew

To carry you back to those wonderful coasts,
Where there's plenty to eat and plenty to wear,
And the face is not known that is burthened with care.

'Tis no dream that I tell—

I know it full well :

I saw it, I felt it, I know it ; and hark !
I hear their drums beating out in the dark !
Get ready, dear sister—they come—they are here !
Lo ! on the hill-side their banners appear—
Banners, and stars, and numberless feet—
'Tis the hosts of the land of Plenty-to-eat !

A. T. S.

MARRIAGE is the best state for a man in general ; and every man
is a worse man in proportion as he is unfit for the married state.—
Johnson.

Book Notices.

Hard Battles for Life and Usefulness: an Autobiographic Record, Rev. J. Inches Hillocks (London: W. SWAN SONNENCHEIN & Co., Paternoster Square) is the title of an interesting book before us. It details at some length the extraordinary labours of a most remarkable man. The Rev. J. Inches Hillocks has gone through what not one in fifty could have endured. Through serious illnesses he has struggled back to life again and again only to grapple with London vice and want like a moral giant. His book throughout reads like a second Iliad of adventure and suffering effort. It shows what a noble mind, inspired by Christian effort, can accomplish in getting at the people in their own homes. The book invigorates one, strengthens one, and inspires one to work more for the general weal of humanity. His book shows us that he has penetrated the very heart of Slumdom. It has attracted the attention of the Queen, and in recognising his earnest labours the Lord Mayor, in 1884, realising his wide experience amongst London poor, sought his name as a member of the General Council. The book has its three distinct centres of work—Scotland, England, and London. Would there were more with his undaunted energy and courage! The book shows what a genuine love he must have for the restoration of little children from misery and crime—labours we might call them of love—for the greatest remuneration he has received has been the grateful and hearty thanks of those for whom he has struggled.

Facts and Gossip.

“Brown Studies; or, Sketches of Life and Character” is the title of a series of articles republished from the *Weekly Echo*, of which the author, Mr. Aaron Watson, is the editor. Those who have seen that paper will not need to be told how humorous and incisive those sketches are; those, on the contrary, who have not read them, should lose no time in doing so. They are quaintly illustrated; and as the subjects treated are chiefly public characters and public affairs, the work is a kind of caricature portrait gallery with a running commentary. It is a capital little book for the railway-traveller, and for the holiday-maker; and, doubtless, before the seaside season has closed it will have been read by its thousands and tens of thousands. The first sketch is about Mr. Gladstone. Then we have articles upon the Salvation Army, the Realities of War, Lord Derby, St. Lubbock, Fire, the Marquis of Hartington, &c. “Brown Studies” is published by Moffatt & Paige, 28, Warwick Lane, London; and the price is one shilling.

VICTOR HUGO's long memory spanned the seventy years between Waterloo and the present; and he had already won some reputation

as a rising literary light before Lord Byron set out on his last journey to Greece, where, instead of fighting with the Greeks in their war for liberation, he died after a short illness at Missolonghi in 1824. When we think of Hugo as almost a contemporary of Shelley and Keats, who seem as far beyond us as the Queen Anne worthies, we realise both the extent of his career and the changes which he witnessed.

DR. HOWARD A. KELLEY, of Philadelphia, advises a four per cent. solution of cocaine as a local application in diphtheria. He has found that it not only relieves pain, but it dissolves the false membrane, and appeared, in four cases in which he tried it, to have a directly curative effect.

PASTEUR finds that even the most impure water, after filtration through a porous porcelain tube, is perfectly freed from germs and microbes. Under a pressure of two atmospheres 20 litres of water per day can be obtained from a tube 20 metre in length and 0.25 metre in diameter. Tubes so used can be cleaned by plunging them in boiling water or heating them in a flame till the organic matter coating the exterior is destroyed. He proposes, therefore, that porous porcelain vessels should be used as filtering media, the external surface being exposed to the impure water. Here is a field for some inventor to get up the best form for practical working.

Correspondence.

To the Editor of THE PHRENOLOGICAL MAGAZINE.

"THE BUMPTIOUS SCIENCE."

SIR,—Under the above title an article appeared in the *Graphic* of the 23rd of May last. I should have been glad if a more able pen than mine had noticed it.

The writer says: "True it is that besides Gall and Spurzheim, the serious and capable promoters of the study, phrenology has gained many intelligent and illustrious supporters, and it is one of the standing reproaches to the fair fame of Aguste Comte that he, too, was a phrenologist. Where, then, is phrenology found wanting? On both sides from which it may be biologically attacked." History tells us that nearly all the great teachers of humanity have suffered for holding opinions that happen to be in advance of their time; and it is recognised that the advanced thinkers denounced by one generation as false teachers are looked up to by the next as the bearers of truth.

In another paragraph the writer speaks of the tables of the skull not being parallel; but I, as a tyro in the science of phrenology, beg to submit that they run sufficiently regular for all practical purposes: so that, provided there be no disease or shrinkage of the brain, no practical phrenologist would be deceived.

The writer next speaks of Jeffery, one of the founders of the *Edinburgh Review*, who he admits would have entered equally light-hearted on a criticism of an operation for cataract or the manœuvres of the Channel Fleet. I have been fortunate enough to read in the *Edinburgh Review* of about that date, 1842, an article in which Jeffery proved, and that to demonstration, that his knowledge of phrenology was as profound, and even might have equalled that of the writer of the *Graphic* article. The latter mentions the exploits of Sir W. Hamilton as the champion of the metaphysicians on the subject of phrenology; but I think that had the mantle of Spurzheim fallen upon a worthy successor, Sir W. Hamilton would have come off rather crestfallen. He further states that "Sir W. Hamilton found, contrary to the professors of phrenology, that the skull-cap was flatter over the organ of Veneration in women than in men." I should like to know from a professor of large experience how he has found the organ in each sex. And in reference to the frontal sinuses he says: "Over these unknown or ignored sinuses the phrenologists had congregated a large number of their smallest organs." Now these cavities are of all sorts and sizes, and plainly make accurate deductions impossible. This anatomical fact, forced home, swept away nearly half the phrenological localizations. In reference to this I find that Gall and Spurzheim, in their "Physiognomical System," 1815, pp. 236, 237, say that, "Those who begin to practise our doctrine find another difficulty in the frontal sinuses, and many adversaries even maintain that it is impossible to determine the development of the cerebral parts situated behind it in consequence of the frontal sinuses. They say the organ of Space cannot be distinguished. The development of this organ, however, and that of the frontal sinuses, present quite different forms. The sinuses only form a bony crest, while the protuberance, indicating the particular development of the organ Space, is round and large. Sometimes the organ of Space is very considerable, and at the same time there are frontal sinuses; then the bony crest is perceived, and this part of the forehead is at the same time prominent."

But why, if he went so far as to say that the fact he stated swept away nearly half the phrenological localizations, did he stop there? I am sure the writer of the admirable article should be complimented on his modesty. I beg to offer mine.

He goes on in a somewhat erratic way against the particular distribution of capacity. "Who denied," he says, "any importance to the grey matter of the convolutions to which so much is now attributed?" Allow me to quote. Gall and Spurzheim, in their "Physiognomical System," pp. 18, 19, say: "The nervous system in general, and the brain in particular, consists of two kinds of substance, namely, of a cineritious and of a white substance; the cineritious, or grey substance, is pulpy, gelatinous, sometimes softer, sometimes harder, more or less whitish, yellowish, reddish, or blackish, and without any apparent organization." And further,

"We consider the grey substance as the matrix of the nervous fibres," and "We accordingly find that the various organic parts take origin immediately from a soft greyish substance, and only mediately from the circulating fluids (p. 20); at first the whole foetal brain consists of a cineritious mass, and by degrees only is it that even fibres appear, and then they appear at certain places sooner than at others, the nervous substance always going off from the cineritious substance;" and further: "Every nervous part has its origin in a proportionate quantity of cineritious matter. From these considerations we may infer that the nervous filaments are originally produced from the cineritious substance."

And, lastly, the *Graphic* writer says: "But it can scarcely be doubted a true physiognomy is an ever-efficient aid to a false phrenology." The writer, with his extensive knowledge, is no doubt aware that Lavater is an authority on physiognomy; but I confess, after reading his works, to have added little to my store of that branch of knowledge. But with reference to phrenology, I think it would be possible for a practical professor to read a man's character though his face should be perfectly concealed from the root of the nose downwards. In conclusion, I wish to remind the writer of what Shakespeare wrote, and it may do him no harm to remember it:

"This above all,—to thine ownself be true;
And it must follow, as the night the day;
Thou canst not then be false to any man."—*Hamlet*.

I remain,

Your obedient servant,

A STUDENT AND ADMIRER OF PHRENOLOGY.

Answers to Correspondents.

[Persons sending photographs for remarks on their character under this heading must observe the following conditions:—Each photograph must be accompanied by a stamped and directed envelope, for the return of the photographs; the photograph, or photographs (for, where possible, two should be sent, one giving a front, the other a side view), must be good and recent; and, lastly, each application must be accompanied by a remittance (in stamps) of 3s. 6d., for six months' subscription to the MAGAZINE.—ED. P. M.]

AJAX.—No; he is not dead.

J. M. D. (Aberdare).—You have much latent power, which will require age, experience, and responsibility to bring into action. Your head is rather too high and broad at the top; scarcely enough so at the base. You have not so much force, pluck, animal life, and selfishness, as you have prudence, ambition, sense of justice, imagination, sympathy, and power of adapting yourself to others. You are liable to be too theoretical and fanciful; too abstract or far-fetched in your thoughts. Your intellect appears to be available, and you have good powers of conversation, observation, and general

thoughtfulness; you usually remember what you see, but more especially what you understand. The natural tendency of your mind is to drift into public life where you will have some office, position, or some regular uniform work to do. You have a very good sense of sound, and ability to appreciate voices; you delight to hear the birds sing, and are very apt to listen whenever there is any singing going on. You can learn music so as to perform quite correctly, but your genius in music so as to sing and play independently of others is not great. Strive to render yourself practical, systematic, and as versatile in talent as you can; encourage energy, force, and worldly wisdom, and guard against being too visionary and abstract in your thoughts.

A. H. (Rotherham).—You possess more than ordinary earnestness of mind, yet you require considerable motive to call you into vigorous action or to keep up a high state of mental action long at a time. Your tendency is to science, to positive knowledge, and to be a practical, useful man. You are not theoretical, abstract, imaginative, imitative, or much given to fun-making, but your remarks are appropriate. You are quite distinct in your perception of character; are able to draw correct inferences, and to see the fitness of things. You may be too easily influenced by others, and your sympathies will need considerable discipline so as not to be wasted on the unworthy. You have an elevated tone of mind; are strongly inclined to honesty, but may be indiscreet through too much sympathy, and not sufficient guardedness of mind. You will get the most pleasure by studying science, history, and travels; should commit yourself to some good cause, and put yourself forward where you can render yourself useful to other people. You need a wife who is sharp, wide-awake, quite original, with a broad head on top, a broad forehead, and plenty of wit.

O. M. (Germany).—You have a strong constitution and a vigorous hold on life; are full of animal life, and prepared for action. You are enterprising, zealous, and enthusiastic; you are always in a hurry, and want to do two days' work in one, and travel by express train. You are adapted to a business that gives scope to your mind, and a plenty of labour. Close confinement to an indoor life would be greatly to your disadvantage. You are favourably adapted, first, to general business,—like buying, selling, shipping, and such like employment; second, to be a manufacturer, builder, or machinist; or, third, to be an overseer, manager, or agent. Your talents are available and practical; you are quick to inform yourself with reference to what is going on around you, and you acquire knowledge easily. You have talent for music, for mechanics, and for an enterprising business; your danger is in getting too much work on hand, in wanting to do more than you can, and in not being sufficiently mindful of your health and the results of overdoing.

J. H. H. (Milnrow).—You are organized for action; are quite executive in your spirit; you are happy in proportion as you are doing, cannot take life easily; are well qualified for business; are

fond of gaining positive knowledge; are a good judge of things and their qualities and uses. You are methodical in your mode of doing things, and systematic in laying your plans. You can figure up closely, manage money matters advantageously. You are fond of exact science; have not a very good memory with reference to details, but have good general judgment, can think and plan well. You appear to have a good moral brain, and a high standard of action. You will not be satisfied unless you are continually improving in character, and advancing in acquiring property. You could have made a good scientific man, and succeeded in one of the professions where experiment is required. You are more vigorous than copious in your style of talking. Guard against being too greedy, and thus overwork or study to gratify your eager, ardent mind.

W. E. (Manchester).—You are a fit candidate for matrimony, only you are rather too particular, and will expect perfection, or nearly so, on the part of the wife. With a good, practical, common-sense woman, having experience in home life and housekeeping, one who is genial, not vain or affected in manner, one kind and respectful, you will be happy. She should be similar to yourself in age, at least not more than ten or eleven years younger than yourself; and one who has experience and discipline of mind. She should be full in form, rather rotund in build, with an ample degree of vitality, with fair mental and motive temperaments, also tolerably well cultivated; for you could not possibly be happy with an ignorant woman, or with one who is cold-hearted. You have a strong social, domestic mind, are rather manly and proud-spirited, generally acting the gentleman. You have a favourable moral brain, and a well-balanced intellect. You are well adapted to what you are doing, but you are naturally capable of managing a business for yourself, and you must strive to be your own man and master as soon as possible, in the same line of business.

W. W. (Hammersmith).—Your mind has not yet got full relief; your education and position in society have not as yet thrown you sufficiently upon yourself to call out your mind so as to feel easy in company. You have more mind than power to express; you can succeed much better with a few, where you are acquainted, than you do in general company. If you will be patient and plod on, you will eventually be equal to almost anything you may attempt to do; for you are not wanting in skill to learn a trade or to manage a business. You are not wanting in general taste, and you are capable of considerable culture. You have aspirations which, if you will try to gratify, you would improve yourself much. You must take hold of some kind of business, and commit yourself to some cause where you would be able to bring out your talents and compare yourself with other people. Encourage conversation, read out loud, commit things to memory, tell what you know, mix up in as good society as possible, and avoid all debilitating habits; keep your mind up as high as possible, and allow your moral faculties to have the ascendancy.

THE Phrenological Magazine.

SEPTEMBER, 1885.

MR. EDWARD LLOYD.



HIS gentleman possesses a predominance of brain power, and has a very susceptible, wide-awake temperament. He must have derived his tone and quality of mind from his mother, but his strength of constitution, energy, and perseverance from his father. He has more than average power of constitution, has a strong hold on life, can put forth more effort, go through with more trials, and bear up under greater opposition than most men. His physiology and physiognomy indicate this; for he has a full-sized face, a very marked nose and chin; he is able to resist foreign influences and maintain his own individual opinions in spite of many that might conflict with him.

His phrenological developments indicate close and extensive observation; is capable of informing himself with reference to a great variety of subjects, with limited opportunities. He has uncommon good practical judgment to see things as they are, to take advantage of circumstances, and to look forward to see what is needed, what is coming into the market to become more valuable, and what is going out of the market.

His Comparison is very large, which enables him to take advantage of circumstances, to apply ideas, to learn by association, to quickly take a hint and to see the affinity of one thing to another. He has great intuitive power, giving quick discernment of truth and power to see the difference between truth and falsehood, or between that which is real and that which is artificial. He is broad in the temples, which indicates versatility of talent, power to contrive, and to make the most of his tools and his circumstances. He has strong Imagination, possesses liberty of thought, takes large and extensive views of subjects, and is disposed to do everything in a wholesale way. His head is comparatively broad at the base, which gives force, push, energy, and resolution: hence he is not easily discouraged. Opposition stimulates him to go

ahead rather than to give up ; but the leading features of his character are in the superior part of his head. His moral brain helps to give stamina, individuality of character, principles by which he regulates himself, and general Catholic good feeling toward others. One of his strongest moral organs is Hope, by which he is powerfully stimulated ; he is full of sanguine feelings and enterprise. Such a mind is not easily discouraged. He is somewhat inventive, and has a spiritual cast of mind that leads him on in ways he knows not before-hand. He has spiritual intuitions that help him to conclusions and greatly aid him in his business movements. His Benevolence, joined to his social brain, renders him kind and tender-hearted in the social circle and to the poor. Firmness is very large, and, joined to his energy, activity, and largeness of soul, gives him great perseverance, determination of mind and will power, so that ordinary opposition or difficulty is only a stimulus to him to go ahead, and nothing but a complete break-down, with all props taken from under him, would let him give up the enterprise.

He is quite ambitious, being high in the crown of the head ; he does not want a rival ; he is anxious to excel in whatever he does and be the chief of his clan. He has favourable powers of expression, is forcible in his style of talking, earnest in his general character, is full of magnetism, and brings others to his aid instead of going to theirs.

He is a master spirit in whatever position he may be, and would make his mark in the world no matter what he did.

L. N. FOWLER.

Mr. Edward Lloyd was born in February, 1815, at Thornton Heath, near Croydon. He began the battle of life at an early age. In 1830, finding himself out of a situation, he collected together his own small stock of books and opened a little shop in the Borough. Besides acting as a bookseller he supplied newsagents with the publications then issued—a very scanty number—taking them round himself. After a few weeks he began to bring out small works of his own, one of the earliest of which was a book on shorthand, the definitions being printed and the shorthand characters written in with a pen. And here we may mention a friend's statement that one of young Lloyd's earliest successes was in a competition in a shorthand class at the London Mechanics' Institution, when he won a silver pen. This Institution was started in 1823, and was the first of its kind in the country. Once started as a publisher, Mr. Lloyd soon threw himself into the struggle then going on against the taxes on know-

ledge. From this conflict he never ceased until complete success was achieved, nearly thirty years later. The names of political writers like Carpenter and Hetherington, who suffered fine and imprisonment, are more prominent in the history of the early period; but Mr. Lloyd was a pioneer of the practical and enduring type, who knew "no such word as fail." Ample warrant was found for his zeal in pushing



the sale of "unstamped papers" in the fact that judicial decisions were of the most conflicting character as to what constituted an illegal newspaper. For instance, one for which Hetherington was fined and imprisoned was afterwards pronounced to be strictly legal. After publishing a variety of cheap periodicals—such as *Lloyd's Weekly Mis-*

cellany and *Lloyd's Weekly Atlas*, on which the *Family Herald* and other publications were subsequently modelled—Mr. Lloyd determined to get as near as possible to a newspaper without breaking the law. A monthly budget of news was accordingly resolved upon, as the Act of Parliament spoke of a lapse of thirty days between each publication. This met with rapid success; but the Stamp Office came down with its alleged power and stopped it. Many years afterwards Mr. Charles Dickens fought out the same question, and ultimately triumphed, through the disagreement of the judges, Baron Parke giving a decision in his favour. These early ventures of Mr. Lloyd were paving the way for the paper which was ultimately to make his name known throughout the world. *Lloyd's Newspaper* was started at a penny in November, 1842, the idea being to come as near a newspaper as possible without breaking the law. But an account of the escape of a lion, coupled with a notice of Wombwell's show, was decided to be a *news* paragraph; and Mr. Lloyd, after only a few weekly issues of his paper, was called upon by the authorities "to stop it or stamp it," being at the same time informed that he had rendered his plant and machinery liable to seizure and himself to imprisonment. The position was a most serious one, but, having entered upon the struggle, Mr. Lloyd, Englishman-like, determined to go on. He found securities for his good behaviour, payment of duties, &c., and published "*Lloyd's*" as a legally stamped newspaper at *twopence*: it was shortly after enlarged and charged *twopence-halfpenny*, and then further increased and made *threepence*. Such was the condition of things that the public could not be made to believe it possible to produce a newspaper at threepence, and for the first few years the circulation did not rise above an average of twenty-one thousand—which left a heavy loss. Again and again the proprietor was almost driven to give up the struggle, but after ten years' hard fighting he found himself with a circulation of seventy thousand. In April, 1852, Douglas Jerrold was engaged as editor at 1,000*l.* a year; but, notwithstanding the great talent of that gentleman, and the fact of his writings giving the highest satisfaction to the proprietor and the public, there was no improvement in the circulation down to September of that year. The death and funeral of the Duke of Wellington being very fully reported sent up the sale to over one hundred thousand copies. Then came in 1853 the abolition of the advertisement duty, followed in 1855 by the abolition of the stamp duty, when the paper was reduced to *twopence*, and the circulation became so increased that the

ordinary machinery was found inadequate, and Mr. Lloyd introduced Hoe's great American machines, which were immediately afterwards adopted by the *Times* and other leading dailies. These machines have since been improved to print two entire papers at once, and four of them turn out 90,000 copies of *Lloyd's News* an hour. In 1861, on the abolition of the small remaining duty on paper, Mr. Lloyd reduced his paper to *one penny*, when it immediately rose to three hundred and twenty-five thousand. Its history since has been one of continued progress. From the first eminent literary men have been connected with Mr. Lloyd's paper, among whom we many mention Mr. Hepworth Dixon, Mr. Horace Mayhew, and Mr. Charles Knight. The first editor was Mr. Ball, who was followed by Mr. Carpenter, who was succeeded by Mr. Douglas Jerrold. At Mr. Jerrold's death in June, 1857, his son, Mr. Blanchard Jerrold, became editor, and remained so till his death in March, 1884. To him succeeded Mr. Thomas Catling, who had been many years on the staff, and as sub-editor had had the direction of the paper mainly in hand; and it is only just to say that to this gentleman's ability, judicious management, and courtesy, the present unexampled position and influence of the paper is largely owing—the weekly circulation having this year reached the enormous number of six hundred and thirty-nine thousand copies, while more advertisements are frequently received than can be inserted. Of the character of the paper we need not speak. Even that most severe and fastidious of critics, the *Saturday Review*, in its issue of February 28, 1885, speaks of *Lloyd's Newspaper* in high terms. It has ever been the faithful advocate of the rights of the working classes and the constant friend of the poor, and that without any political or social rancour, or attempt to set class against class. It may interest our readers to know that the paper which is used is made from a grass called *Esparto*, which grows in Algeria on Mr. Lloyd's own estate in that country.

Mr. Lloyd is also proprietor of the *London Daily Chronicle*, which was founded on a local journal (the *Clerkenwell News*), for which he gave 30,000*l.* in 1876. He has since spent on it another 125,000*l.*, 30,000*l.* of which was paid for the advertising offices in Fleet Street.

LAWS and principles are not for the times when there is no temptation: they are for such moments as this, when body and soul rise in mutiny against their rigour; stringent they are; inviolate they shall be.—CHARLOTTE BRONTE.

PHRENOLOGY FOR CHILDREN.

- (a) The selfish propensities.—(b) Why so called?—(c) Why do we need the selfish faculties?—(d) What faculties come under this group?—(e) Combativeness, its definition.—(f) Location.—(g) When large, what does this faculty incline a person to do?—(h) What is the language of this faculty when small?

LET us learn something about (a) the selfish propensities to-day.

(b) I can hear some of you ask, Why are some of our faculties called selfish? Well, my dears, they are called selfish because of their self-protecting propensities. They make us conscious of our own wants and needs, and incline us to watch over the necessities of the body. Your bodies need nutriment, clothing, shelter; they secure them for you. You need protection against the various accidents that threaten your safety; they give you that protection. You have difficulties to overcome in order to be happy; these they master. You will understand by this explanation that they are important qualities in your characters; yet they need careful training and guiding to prevent them from becoming perverted. Boys and girls who have no loving parents to discipline these faculties often begin early to get into bad ways, and are easily led into faults of all sorts—such as gluttony, theft, cunning, suspicion, cowardice, anger, revenge, malice, cruelty, drunkenness, and murder. We hope all of you to whom we are talking now have these selfish propensities well under control.

(c) We need all the selfish faculties: Combativeness and Destructiveness to give us energy, to help us to overcome all difficulties, to give us true courage; Acquisitiveness and Alimentiveness, one to procure us food and the other to induce us to eat it when obtained; Secretiveness to enable us to put a guard on our words and actions; yet we should not use these different organs to fight, to contend, or to kill; to hoard money, to become gluttonous, or to deceive.

(d) And now you are impatient, I can see, to know what these faculties are called? Well! they are divided; so that you have in this group Combativeness, Destructiveness, Alimentiveness, Acquisitiveness, Secretiveness, and Cautiousness. "Long words," says Tom. Yes, they appear so at first, but

they are very easily understood when they are pulled to pieces. Let us take the first one—(e) Combativeness. Take away the last two syllables and every one of you is old enough to know what the remainder means. It is sometimes defined as a bold, a defiant, a defensive spirit; it means, however, more than that. It makes a note of difficulties, impediments, and obstacles; it resists and overcomes them. It gives the disposition to oppose, resent, defy, and to dare. It makes you boys courageous and brave in the hour of danger. It gave Willie courage to go into a thick and dangerous wood, where his little sister had wandered away from her nurse and was lost. The nurse was too frightened to go into the wood alone; but Willie, though young, fired her courage by saying he would go. He possessed true courage as well as love for his sister.

(f) This faculty is situated behind the top of the ear, on both sides of the head.

(g) When large it will make you bold to do your duty, no matter how unpleasant the circumstances, and exceedingly zealous in the defence of self, of rights, of your friends, of your country. You will find this faculty large among your mates when you see them take a pleasure in difficulties, and show a love to contend, oppose, and overcome anything in the direct way to their own wishes or ends. With it large Columbus braved the unknown seas in search of a new country, and would not give up though all on board the vessel besought him to return home. Some show this faculty in a contradictory spirit. Some little girls are very troublesome to their mothers. When they are asked to sew they want to go out and play; when they are sent on an errand they pout, and want to stay in and read a story-book. Now they wouldn't have thought of the *play* or the *book* if something else had not been suggested, or if they had not shown out their combative spirit.

(h) When small the language of this faculty is always saying at school, "I can't do this difficult lesson." Without this faculty the boy gives up without trying much to overcome the difficulty, and never courts a tough job, but goes a long way round to avoid it. All members of the Society for the Prevention of Cruelty to Animals have rather a small development of this faculty; yet with firmness, and a love for animals, are firm in carrying out their principles for peace, and hate cruelty of all kinds. With it small a boy does not resist encroachments nor defy opposition, but tamely yields to circumstances, but seldom, if ever, throws the apple of discord into the lap of peace.

DESTRUCTIVENESS IS THE SECOND FACULTY OF THIS GROUP.

(a) Definition.—(b) Location.—(c) How does this faculty express itself in children?—(d) How do animals show this faculty, and what is the difference in the shape of their heads?—(e) Do soldiers show this faculty even without a love of their country?—(f) Should not children early learn to curb their angry passions?—(g) How can this faculty be perverted?—(h) How is its deficiency shown?—(i) Is this a necessary faculty?

(a) The definition of this organ is usually termed resolution, cruelty, a love to destroy, and desire to kill; but we think a better name for it, when under control, would be energy, executiveness, spirit, pluck, and endurance.

(b) The organ is situated over the ears, on each side of the head, and gives breadth to the side of the head.

(c) This faculty shows itself in children by making them resolute in obtaining their own way; it makes them desirous to be doing something, no matter what, so long as they are employed. It also makes some cruel and desirous of seeing blood shed, and so they stick pins through flies and butterflies; they worry the cats, they tease the dogs and pigs, they throw stones at the birds, they play with the fish, and hurt the helpless, innocent animals.

(d) Animals show this faculty by tearing each other into pieces, and destroying anything in their way. It makes dogs fight, while Combateness makes them only bark. Examine the heads of animals and you will find all the fiercer kinds—lions, tigers, and bears—possess broad heads from ear to ear; while the docile and tame animals—such as cats, doves, sheep—have narrow heads below Secretiveness.

(e) Soldiers have large Destructiveness, or they could not take any pleasure in going to battle. It is not altogether a patriotic love that makes a man defend his country in war, there must be a plucky, executive element in their natures that leads the boy to say, "I want to be a soldier."

(f) Children should try to curb their angry tempers and passions; for if we endeavour to train animals, and tame their tempers, how much more necessary that little children should be helped to curb their feelings and inclination to be naughty and disobedient. Some of you must cultivate more kindness and forgiveness than others, because the inclination to do wrong is stronger than others. You must not, however, think that because you have certain phrenological inclinations that need curbing you are not responsible for your actions; you are learning about your characters now so that you may

improve and discipline them. Some need to restrain one faculty, and some just the opposite; but as we are none of us perfect, we all must be willing to fight with our weaknesses as long as we live.

(*g*) This faculty is easily perverted, when large to begin with, by children being allowed to get angry at play and to strike one another, or to tease their mates by knocking their blocks down just as the top has been finished, or by throwing a little fellow's ball into a tree for it to lodge in the leaves. Think when tempted to do anything of this kind in a naughty spirit whether any of you would enjoy the fun if you were the one to be teased. It leads to cruelty and revenge, hard-heartedness, harshness, and takes delight in scenes of destruction, when not under proper control.

(*h*) Are we to understand that this is a bad organ to have? Certainly not, all our faculties are necessary to our well-being. With a deficiency of Destructiveness a child is wanting in energy, force, or efficiency; without this faculty we should have had no steam-boats, railways. A person prefers peace, ease, and quiet, and does not wish to struggle with physical difficulties, even to keep hold of personal rights, but yields to trouble, trials; and the will of others, especially when leaving home for the first time.

(*i*) It is a necessary faculty in many ways; it helped little Maggie to be courageous, and set her to work to extinguish the flames of her own dress instead of running out of doors to cry fire. One must have the courage to defend themselves and others as well as the thought to do it. Two boys were playing with their father's fish-line on a rock which projected into the river; both boys wanted the same line as it had the best fish-hook. As they quarrelled about it the younger boy, Freddy, fell into the water, which was deep just by the rock. Robert was not courageous enough to rescue his little brother, though he could swim, so he ran up the bank and called for help; but Freddy had sunk once before any one was attracted by the voice of distress. When, finally, several men ran to the spot, one, the quickest of them, dashed off his coat and plunged into the water, and caught the little fellow just as he was rising the second time. Robert was short of courage, but he possessed large Destructiveness, which made him want to possess the best line. How much better if they both had loved each other sufficiently to curb their Destructiveness and give up to each other! Boys need this faculty to secure from the soil and the rocks the materials indispensable to our physical well-being; hence this faculty, amidst the many trials and troubles of life, endurance is requisite, and this

organ gives it. This faculty will help you as men and women to grapple with the unyielding nature of things with ceaseless energy, and force an unwilling compliance with your demands. Deserts are to be made productive; mountain-paths to be made smooth lands, and be protected from the sea; wildernesses to be cleared of their forests; the elements to be subdued and made subject to the requirements of man. These things, my boys, you cannot do without large, well-balanced Destructiveness.

ALIMENTIVENESS.

(a) Definition.—(b) Location.—(c) Its natural language.—(d) Its necessity.—(e) Its abuse.—(f) Why must this faculty be restrained within certain limits?—(g) Why must this faculty be cultivated when small?—(h) The appetite and taste for smoking and drinking.—(i) True enjoyment over food when the appetite is not perverted.—(j) Habits of children when young in regard to eating and drinking.

(a) The definition of this faculty is to ask for food—solids and liquids. It gives the appetite to eat, and when unrestrained leads to gluttony.

(b) The location of Alimentiveness is situated immediately in front of Destructiveness, on each side of the head.

(c) Its natural language in children is, What are we going to have for dinner, mother? This faculty always makes them punctual at meal-time, even if they are late for everything else in the day.

(d) It is necessary and right for you all to have good, healthy appetites, and it is pleasant for you to enjoy your food, for were it not so many would forget to attend to their meals properly, and would not take sufficient food to build up their bodies to be strong and healthy.

(e) To avoid the abuse young children must learn, as one of their first lessons, when they have eaten enough, and never eat because a thing is offered to them, if they have taken sufficient. If you do not early deny yourselves in habits of eating, and dividing your apples and grapes with your little friends, you will grow up selfish, and excite the faculty so much that you will be in danger of perverting your appetite to gluttony, and perhaps to intoxication.

(f) When too active this faculty must be restrained; for if allowed to have its own likes and dislikes consulted in everything at the table, the natural appetite becomes perverted, and is the cause of much disease, throwing the digestive organs out of order, impurifying the blood, and disturbing the operations of the mind. It is the cause of

untold misery and unhappiness; it is only content with strongly-seasoned foods and drinks, and leads to gluttony, epicurism, greediness, and drunkenness.

(*g*) When children have small appetites there is an indifference to food, and they eat only as a matter of necessity, and do not think or count much of a forthcoming repast, and never eat with a relish. It is necessary to cultivate a desire for a proper amount of food according to the daily wear, tear, and waste going on. The greater the exertion, of either mind or body, the greater must be the supply. Quiet children are more the exception than the rule; hence their activity gives them appetites that often surprise older people. Sedentary habits cause less waste; therefore this must be taken into account when the appetite is large, and be restrained; but many persons do not eat enough to keep up their vitality.

(*h*) Does this faculty affect the tastes for drinking and smoking? It does; and boys and girls ought to be very careful when they are forming their tastes not to cultivate the liking for wines by draining their parents' glasses, as some children do. I am going to ask you to think seriously over this matter. Girls, you should not encourage your brothers to smoke because you think it is a manly habit. This present generation will seriously injure itself by the quantity of tobacco it consumes daily. Boys, do without smoking, even if it costs you some self-denial, and say, No, when asked to have a cigar.

(*i*) In a healthy state children should enjoy their meals, and should eat heartily and regularly of simple food and pure drinks.

(*j*) Remember, children, that habits are easily formed, but with difficulty broken; so endeavour to keep your appetite in a purely normal condition, and you will have less disease, less pain, and fewer mental as well as physical disorders.

ACQUISITIVENESS.

(*a*) Definition.—(*b*) Location.—(*c*) How do boys and girls show out this faculty?—(*d*) How does a miser show it?—(*e*) How do parents show it?—(*f*) What kinds of Acquisitiveness are right and must be cultivated?—(*g*) What kinds must be restrained?—(*h*) Why must children restrain this faculty?—(*i*) Why must this faculty be cultivated when very small?—(*j*) What is the perverted language of this faculty?

(*a*) Definition.—Desire to acquire and lay up property, a disposition to hoard, to accumulate, collect, gather together, and economise.

(b) Location—just above Alimentiveness and part of Destructiveness.

(c) Children show this faculty by collecting stamps, coins, books, or playthings.

(d) A miser shows it by hoarding up money and worshipping it like a god, holding it too sacred to spend or give away.

(e) Parents show it by collecting means to support their families.

(f) Some kinds of Acquisitiveness are right. We need clothing, food, and shelter. These do not come to our hands without effort on our part; this Acquisitiveness sees to and does for us. It, therefore, disposes us to labour for the purpose of getting, to save, and to acquire. It is right for us all to economise, and not waste anything; and it is also right for us to acquire instruction and books for knowledge.

(g) That kind of Acquisitiveness that needs restraining is the kind which makes children covet and take things belonging to their mates. A child may often steal through the over-exercise of this faculty and a desire to possess what he sees others have; but he may feel so worried by his conscience for having done the thing that, he or she, as the case may be, will openly confess the action and beg to be forgiven.

(h) Little children, you must guard against exercising this faculty too much, and content yourselves with what you have, and be willing to share your playthings and divide your sweets with your schoolmates, and avoid stinginess and a hoarding disposition; yet do not be wasteful or squander money foolishly. When large the person knows the value of property, and neither wastes nor squanders it, but puts it to good use; is economical and disposed to provide for the future, and knows how to make the most of things.

(i) Without sufficient of this faculty a person allows others to take undue advantage of him and his circumstances, and lacks the necessary appreciation of property, and is not industrious to gain, nor disposed to save; has no engrossing sense of what belongs to him, and must endeavour to think more of his own interests.

(j) The depraved exercise of this faculty makes a boy over ready to trade, grasp, hoard; he is too avaricious, penurious, miserly, and thievish. It gives the desire to have at any risk, to possess by one means or another, and to disregard the claims of others. All of you must avoid the extreme exercise of this faculty; but you should have sufficient to properly look after your own affairs.

SECRETIVENESS.

(a) Definition.—(b) Location.—(c) How do children show it?—(d) What animals show the secretive element the most?—(e) Is this faculty shown out by actions as well as by words?—(f) Do not many use this faculty who do not intend to deceive?—(g) What will this faculty lead to if not restrained?—(h) Why is it necessary to cultivate this faculty when small?—(i) Conclusion of our first lesson. What next?

(a) Definition.—The desire to hide, secrete, to evade, or to deceive. It gives the power to put due restraint upon words and actions, thoughts and feelings. It gives tact in managing, policy, diplomacy, and artfulness.

(b) Location.—Secretiveness is located above Destructiveness, on both sides of the head.

(c) It will only be necessary to remind you children how you show out this faculty of your minds in order for you to understand me. Minnie was very anxious to tell Jack something, but she said, "You will be sure not to tell, won't you?" Jack promised, so the secret was told. Lucy has large Secretiveness, and always looks round to see if any one is watching her. Tom is a truthful boy and means to do right; but when pressed to tell particulars about things he does not want to explain, he evades the truth without telling the whole story. Many tricks are done at school, when the teachers are not looking, through the aid of Secretiveness. Many children think they are not doing wrong so long as they are not found out.

(d) The cat, the fox, the squirrel, the spider, and the opossum, are all known for their cunningness and shyness, also for their deceitfulness.

(e) Yes, actions sometimes speak louder than words, and deceive and imply as much, if not more, than untruthful words.

(f) Yes, many use this faculty as a convenience. A mistress will tell her maid to say she is "out," while she slips into the garden, if she does not want to see a caller. She does not want to say she will not see the caller, so she excuses herself. The mistress does not gain much, for the maid is more innocent than she gets credit for, as she goes to the door and says, "Please, the mistress says she's out."

(g) When large and unrestrained this faculty gives the power to possess without divulging to others. Its perversion leads to slyness, cunning, duplicity, deceit, falseness, manœuvring, and treachery. The children did not mean to deceive, but they were not truthful; they acted a character they were

not in reality. As they become men and women they will take their deception into their homes, into their business pursuits. It is time to restrain this faculty when inclined to make a wrong statement, if an honest disposition is cherished. Cultivate more frankness, candour, open-heartedness, and a single eye to truth. It is not necessary to disclose all our plans to others, nor express all our impressions or ideas, or we shall offend more than please our friends.

(*h*) Those who are deficient of it are open and transparent, and have no power to conceal any undertaking or movement, no matter who is present. They say and do and act out their characters and give expressions to their minds often to the discomfort of those around them.

(*i*) And now, children, we have come to the end of our first lesson, and have learned to understand that certain portions of our brains give us feelings to protect ourselves and look after the wants of our bodies, if we rightly use them. We shall next study the selfish sentiments, which are more elevated in character, yet similar to the last group; but we commenced with the selfish propensities first that you might better understand the lessons that are to follow.

THE NEW PREMIER PHYSIOGNOMICALLY CONSIDERED.

BY A MAN IN THE STREET.

LORD SALISBURY'S photograph has for the last week or two taken the place of Mr. Gladstone's in the shop-windows. Formerly a really good portrait of the Premier was rarely to be seen, while his great rival's was to be met with everywhere. He was the most be-photographed man in England. You met his striking physiognomy everywhere, in all sizes and attitudes, and of every degree of excellence, or the reverse. One was able to judge of him in the pose of the orator, of the wood-cutter, of the old granny. In the latter attitude he is the least satisfactory: there were old grannies in the late Cabinet, but they were in the other House. As a granny Mr. G. looks as though he were pickling a rod for somebody. I got tired of the face; it wearied me; I believe it wearied the gods—that everlasting visnomy! And so, for a change, we have Salisbury. I am pleased with it, because it is a change anyway.

It is no longer a Scotch mazard we have to gaze upon in every shop-window—we idlers of the street, but an English one—beefy, bacony, if you will, but thoroughly English.

Those well-fed chaps were not fed on oatmeal, if his lordship even knows the taste of it. Query : Did his lordship ever take gruel ? I doubt it—he enjoys such superb health. Few men eat their meals with more relish or thank the Lord for a sounder stomach. With him, indeed, good digestion waits on appetite and health on both. He does not need to tabulate his eating : two bites to a cherry, and thirty-two to a piece of beef or mutton. He leaves these matters to be arranged betwixt grinder and gullet, and they do it very well.

He is no dyspeptic, and his views are not jaundiced by that malady. Nor does he possess that kind of conscience that regards it as sin for people to enjoy what he cannot take pleasure in himself. His conscience is that of the common sentiment of right and wrong. He is no philanthropist, in the common sense of the term ; possibly he does not believe much in what is known as moral suasion ; he is so well learned in human nature that he knows man's brute instincts must be compelled. In other words he is not to be misled with an ideal scheme ; he sees through it at once, and shatters it with a pitiless logic. That is his great force—logic—the logic of facts. You can't build up empires with epithets, nor hold them together with skeins of silk, he says, or would say if he were a phrase-monger, which he is not.

As he is no idealist, so he is not a man of great original views ; he is no romancist, or dreamer of dreams, but a plain, matter-of-fact thinker, with a great regard for the “bottom facts,” as our American cousins would put it ; and among the bottom facts he most regards is property.

“Proputty, proputty, proputty—that's what I 'ears 'em saäy.”

His intellect is altogether of the constructive, organising order. Had he not been born, so to speak, in the blue, he might have made a great engineer, and given the world some lasting monument of engineering skill. As it is he will, if he gets a chance, show his constructive power in welding together the *disjecta membra* of the empire, of late so badly shaken. He would have made an equally good tradesman : few know the value of money better. The getting and saving propensities—acquisitiveness and secretiveness—are ruling passions.

Of one thing we may be certain, if any reliance is to be placed in Lavater's art, and that is, that Lord Salisbury's tenure of office will not be characterized by the development of new theories of government, or new methods of procedure, but he will distinguish himself by holding together that which is, strengthening defences, and making firm all round. He is a cautious worker, and does not take hasty steps in the dark ;

but what he makes up his mind to do he will generally effect. He has a tremendous hold ; he grips like a bull-dog.

He will have some personal difficulties to contend with, difficulties of temper, method, and so forth. He has not the persuasive (perhaps one should say the compelling) powers of his great rival ; he can't sway men as the latter can (happily perhaps) ; I doubt whether he grasps individual idiosyncracies so well. But where he can't persuade he can compel by his logic. His fault is that he is too blunt and direct. He does not stand on the niceties of fence, but lunges out with all his might—is no *petit maître* but a veritable Hotspur ; his nostrils, like those of the war-horse, breathe defiance.

Then he has a fault of memory ; his vehement consciousness of the present burns up much of what has gone before. Perhaps he is at times too austere ; but he is a genial, large-hearted friend, and though careful for self, careful for others also. Few men are so reverential as he ; few so grateful for what to-day, as heir of all the ages, has given us ; few so doubtful of new expedients. And yet withal he is a hopeful man, with plenty of faith in man's ultimate destiny ; no Radical could have more.

WHAT IS A CLOUD?

THE answer to the above question will probably be, that a cloud is a mass of watery vapour, carried up by the sun's rays from the sea and rivers : such at least is the hypothesis generally adopted. It is, however, but a hypothesis, not supported by any other evidence than that such is the general belief. It remains to be seen whether the hypothesis can hold good in the face of many facts known to science which seem to make such a theory impossible.

First of all, what is meant by the term watery vapour ? It can hardly be steam, since this requires at least 212 degrees of Fahrenheit, the boiling point, before water can be brought into the state of steam. Now, no such degree of heat (from the sun's rays) as 212 degrees ever occurs ; we mean, of course, in the open seas or rivers, and not volcanoes, which do throw up boiling water sometimes. Then, again ; we all know that steam condenses as soon as it leaves the boiler. But it may be answered that the sun's rays do not carry up steam proper, but only watery vapours. This is apparently more of a distinction than a difference, since whether the watery vapour be at the boiling point, or whether only heated

to a less degree, it will condense by losing its heat the moment it reaches a temperature lower than its own. Now, the temperature of our atmosphere decreases about one degree Fahrenheit for every 100 yards; therefore, supposing the sun's rays to carry up watery vapour from the sea at (say) 70 degrees Fahrenheit, one mile in height or 5760 feet, the temperature would be 19 times lower, or say 51 degrees; and again, at 5 miles high, or another 19 times lower, it would be reduced to 32 degrees: in other words, to the freezing point of water, which is complete condensation.

But water alone weighs 816 times heavier than common air; therefore, as the watery vapour has in its ascent lost all, or the greater part, of the heat particles that are supposed to have lifted it up, it would seem to be a necessary consequence that, in lieu of forming clouds, it should at once deposit its moisture in the shape of rain, hail, or snow; on the contrary, however, in numerous cases, even in our own country and latitudes, and still more so in the south of Europe, the clouds float on, especially in summer, without depositing any rain for months together. Whole regions in fact, like Arabia, the Sahara of Africa in the north, and the Karroo Desert near the Cape of Good Hope, as well as the deserts of Persia, north of India, and Central Asia, as also of Australia; and even islands such as the Cape de Verdes very often see no rain for two or more years at a time. Moreover, it is not in summer when the sun, being at the Tropic of Cancer, has its greatest force in our northern latitudes, but rather in the winter months of November and December that we have most clouds and most rain; yet it is then that the sun has its least force to us in Europe, it being at that time over the Tropic of Capricorn, or double the distance from us that it is in June.

Then, again, we have in many parts vapour of water (humidity) in the shape of fogs and mists close to the surface of the earth, and these also more often in the winter than the summer; and though they be also generated, according to the old theory, by the sun's rays acting upon water, yet they do so in a very different manner in the case of clouds, which latter rise into the upper regions of the atmosphere and float away, while mists and fogs are local and stationary. What, therefore, is the cause of the difference?

To show generally what is the weight of water which is held up in the upper regions of the air, whether in the shape of clouds, fogs, or vapour in general, let us give a few cases of rainfall that occur in various parts of the globe.

In India, in the upper part of the Bay of Bengal, there is

said to be a yearly rainfall of some 44 feet; and as this occurs during the Monsoons, once or twice a year, it would seem that that amount of water, however formed, must be contained or held up by some force for months together, and can hardly travel very far to the north or south. Also on the western side of India there occurs a yearly rainfall of some 44 feet, and Maury ("Physical Geography of the Sea") estimates the rainfall as sometimes reaching 12 or 15 inches in one day. The same authority estimates the mean annual rainfall on the entire surface of the earth at about 5 feet. We might also mention the Lake and other regions in Africa, of almost perpetual rain; but it is hardly necessary to do more than refer to the fact. It never rains, however, as shown by Maury, until the watery vapours have been condensed by ascending to a height sufficiently cold to condense the vapours extracted from the ocean. On the other hand, the same author states that our northern European regions are supplied with moisture brought from the south of the equator, some 3000 miles through the upper regions of the air, until they get condensed by the cold of our northern latitudes, and then fall as rain; and this principally in the winter season. Even under the line the condensation of watery particles in the colder upper region takes place in the same manner as in Europe. What, then, holds them up for months together at one or two miles high? The watery particles must lose their heat in ascending; and on the theory of the sun's rays acting to raise or hold them up in solution as vapours, it cannot be, since at a certain height above the sea and earth the vapour will and does condense. It remains, therefore, to be seen whether some other hypothesis may not be at least put forward to endeavour to answer the question at the head of this paper. The hypothesis that we venture to suggest as being preferable to that of watery vapour carried up by the sun's rays alone is, that hydrogen gas may be the carrier. This opinion has in its favour the following considerations: Hydrogen gas is 14 times lighter than common air, and being in the shape of gas is not affected by heat or cold in any material degree. Hydrogen forms two thirds in bulk, of water, and, united with one third of oxygen, produces that liquid. The separation of these gases can be obtained chemically; but how does *Nature* act so as to bring about the disengagement of hydrogen gas? We suggest that such action is aided in fact by the rays of the sun, but also, and most materially, by the *tides* of the sea, which all over the world denude, more or less, every twelve hours a very large area of its surface. This denudation, by diminishing the

mass of water at each low tide, would allow the sun's rays, combined with the motion of the air, more easily to disintegrate or release the hydrogen therein contained, the which, when once set free, would rise by its greatly superior lightness into the upper regions of the atmosphere. There is also reason to believe that the constant motion of the waves of the sea would assist materially in liberating the hydrogen from its watery bed. It is also said that the salt of the sea has some disintegrating effect in releasing hydrogen, as we can perceive by our sense of smell when the tides are low, at which time bad odours are prevalent. In salt-water marshes this is particularly the case; indeed all marshy lands give out evil odours and induce ague and fever, even in our northern latitudes; witness Holland, and the marshes in Lincolnshire and Somersetshire, and still more in the Tropics. There is reason to believe also that the reciprocal action of sea and land must bring about electrical currents, and these also would assist in releasing oxygen and hydrogen. The fish and the sea-weeds must also separate the oxygen in order to breathe and live; but the consumption of the oxygen must also necessarily bring about the liberation of the hydrogen, which was chemically united with it. When the myriads of fish, molluscs, and other animals that live in the water, are taken into account, it will be seen that they must play a very important part in separating the oxygen, and thereby liberating the hydrogen, which, when released, will mount up and form fogs and clouds, being so light a gas. The decomposition of all bodies, whether vegetable or animal, that have once lived either in the sea or on the land, must also release a large amount of hydrogen, as we perceive by the smell, and by the rapid dwindling, or shrinking, of the bodies of which water, in one way or another, forms the largest part of their structure. Then, again, there are large forests whose trees release carbon and hydrogen, and also take it in, all which causes a constant amount of change and disintegration of the gases; this is more particularly shown in the coal measures, formed as they are of vegetable matter, and which give out such quantities of carburetted hydrogen gas as to cause explosions such as lately occurred in the Clifton Colliery, near Manchester.

To sum up, our suggestion is this: that hydrogen gas acts as a carrier up of watery particles; or more probably that the hydrogen is released mainly from the seas and the land and rivers, and from its great lightness ascends into the upper regions of the air, and there remains until a sufficient amount of electric matter has been formed, which then, by ignition,

brings about the union of hydrogen and oxygen in the requisite proportions to form water, as we can see takes place during thunder-storms, which liquid then falls as rain by the mere force of gravitation.

A. H. IVENS.

THE NATURAL HISTORY OF KISSING.

IN this age of evolution, when we take a sort of scientific pride in proving that we had our origin in the monkey, and perhaps too much caress our faults because of our relationship to the brute creation, rather than glory in those characteristics which (it has been our delight aforetime to believe) connect us with a hierarchy of spiritual beings, it needs no apology if we try to explain, by this theory, the origin of habits that have become a second nature, or of propensities that have become so inherent to our common nature, that it would be difficult to imagine human beings without them. Take, for instance, one of the former class as an example: the manner in which boys and vulgar men exhibit contempt, namely, by placing the thumb against the nose and stretching out the fingers. How did such a habit arise? We know that in dealing with savage enemies it is customary in approaching them when overcome to compel them to lay down their arms and hold up their hands above the head. Can there be any parallel in the two cases? Was it ever a custom among savage people to make a vanquished enemy in token of submission hold up the outstretched hands in front of the face, thereby indicating that they were quite powerless to hurt? If such were the case, it is easy to conceive how a custom that at first betokened submission eventually became a sign of contempt. Submission betokens weakness, and stirs hate, and hate allied to weakness breeds contempt.

We have here, however, to do, not with a mere habit, but with a propensity that has become part and parcel of human nature—with kissing. How did kissing have its origin? If we acknowledge special creation, we are answered at once. The Creator ordained that men and women should kiss each other, that Frenchmen should perform the osculatory process upon one another, and that cabinet ministers should kiss the hand of their sovereign.

But if we do not admit special creation, and look upon everything as having had its origin in some particular circumstance, or in some bias gradually augmenting through ages and eons, then for an explanation of the propensity in man to kiss, we have to trace our homo to his beginning. We

are aided in our research by the fact that man is the only animal that kisses. It is true that we observe something analogous to the osculatory act in some of the lower creation, but the kiss pure and simple nowhere but in man—including woman, of course. Horses, cows, deer, and dogs even, nuzzle each other; but then a nuzzle, being performed with the nose, is not a kiss—very far from it. The nearest approach to kissing that we find in the brute creation is the billing of birds; and here I think we may probably find a hint as to the origin of the propensity. The bird feeds its young. It takes the early worm, the grub, the seed, or whatever it may be, and places it in the beak of the fledgling. In so feeding its young the parent-bird manifests an act of affection. Its love for its offspring makes it take so much care for its well-being; but it is also a pleasure to the old bird, as to the young. To the latter the touch of the delicate grub, the fruit, or the seed, given it by the parent-bird, stimulates the juices of the stomach, and so causes pleasurable emotions. The sight of the approaching beak causes the same emotion by suggestion. Similar emotions are experienced by the parent-bird through sympathy. These emotions may even be awakened by merely touching beaks; hence billing, the nearest analogue we find in the animal creation to kissing.

But for kissing proper it requires a peculiar form of lips—a form such as we only get in man—and woman, of course. The nearest approach to human lips we find in the monkey—man's progenitor—and in some species of monkey, if not in all, we may observe a habit similar to that we have noticed in birds. The monkey feeds its young from its own mouth, that is, when it begins to require some solid food, and has not yet developed grinders of sufficient strength to do its own masticating. We can imagine in the early days of our race, when we were still much ape, and little man, that the human mother did the same for her young; she performed the office of mastication, and then transferred the pulpy food from her own mouth to that of her child. Indeed, it is no mere imagination; the habit may be observed to-day among lowly and unsophisticated people. I have seen peasant-women in Germany, as well as in Ireland, frequently feed their babes in this way: chewing the lumpy food to a pulp and then passing it from mouth to mouth.

But, as observed above, we can imagine in early apish days, when spoons were still an invention in the womb of time, and when cooking was unknown to the embryo man, that the child was chiefly fed in what we may call its pap-days by the mother from her own mouth. Now for the

passage of food from mouth to mouth in that way it requires a peculiar organ. It might have been arranged, as in the case of the elephant, by means of a trunk. Fearful thought! Imagine Nature struggling through fit, fitter, and fittest, gradually endowing man with a trunk instead of a mouth as now—or his feminine counterpart, anyway! Who knows how narrow our escape may have been. Imagine lovely woman with a——. But we will not pursue the thought.

That the male and the female have lips alike proves to me that our early apish progenitors were highly domestic (not to say domesticated), and that the father did his share of feeding the young equally with the mother.

Of course from age to age plastic Nature gradually perfected her means to the necessary ends. The mouth of an ape is ill-adapted to the act of feeding in comparison with that of the human mouth. Let any one make the experiment who doubts it. In some monkeys there is more adaptability in this respect than in others. For a perfect instrument for the transference of food from mouth to mouth it is necessary that the sides of the opening, so to speak, should be capable of fitting so closely and perfectly as to prevent the food in passage from escaping. To this end it is that the lips have developed so much mobility and plasticity, in order that they may be shaped so as to join with another mouth and form a sort of tube. The thicker the lips, the greater the extent of contact, and of course the more perfect the junction, and consequently the less chance of leakage in the transference of food. Hence the perfect lip must have a certain amount of thickness.

As in the case of the bird, so in that of the human being. The act of feeding the babe, from a necessity becomes a pleasure. The parent, like the child, experiences an emotion of pleasure in the act of feeding its young. The anticipation of food stimulates the functions of digestion and sends an agreeable stir and thrill throughout the whole frame. There is nothing equal to it when, as in early youth, the functions are all normal and in vigour: the whole being responds to that act of pleasure. The parent sympathetically partakes of the same emotion. It is the parent's reward. But to the unthinking babe the mother's lips are the sign of food, and it only needs their approach to stimulate these pleasurable emotions. So with the parent: the pleasure originally communicated by touch of the child's lips in the act of feeding remains when the touch has no connection with the administration of food.

Does it need more explanation to show that kissing, as a

demonstration of affection, of love, grew purely and simply out of this act of feeding, and that the kiss of man and woman as a demonstration of affection is merely a physiological reminiscence of man's origin?

The lips are now regarded—and rightly—as the banners of love, hung as it were on the outer walls. They are the token and insignia of the inherent force of the familiar passion for all to read and know. But they are also a sign of appetite; for the two—appetite and passion—are intimately blended: and in the aged, when these faculties have become weak and quiescent, the lips lose their pristine fulness and their colour.

S.

LARGE HEADS AND SMALL HEADS.

BY JAMES COATES.

WHAT ignorant pretenders these phrenologists are! They assume that it is only men with large heads who make "headway in life," and that small-headed men are in no way equally successful. It is quite clear the facts of the case are sadly against them. It is quite true "the brain is in the head, but it does not follow that the brightest or best balanced brain is in the biggest head. A man died recently in Lapland who had a whiteish mass in his skull cavity that ought to have equipped a Plato, if size were the test of capacity. But he was a boor, of low perceptions, and his enormous cranium was looked upon as a curiosity by his fellows." Nut No. 1 for phrenologists to crack.

The Lapps, Norwegians, and Finns, are remarkable for their "big head and little wit," yet men of genius—poets, artists, and musicians—have had only average-sized heads. "Charles Dickens' head was less than the average; Lord Byron's head was remarkably small; Charles Lamb's was less than average weight; Gambetta's was of a feminine cast, and less in weight than an average school-boy; Lord Chelmsford's head barely filled a six-and-a-quarter hat." Nut No. 2 for phrenologists to crack.

The heaviest brain we remember of tipped the scales at seventy ounces, belonged to an ignorant working man, who had committed two murders, and who died of *suspension* several years ago in America; and the next heaviest belonged to a genius who could not spell his name without large print letters—with great difficulty at first. Raphael, Cardinal Mezzofanti, Captain Cook, Talleyrand, Jeffreys, Seldon, George Washington, Lamb, Chelmsford, Gambetta—

all men of undoubted genius, varying in talent, ability, and individuality—all making their mark on the page of history, had less than the average-sized head.

Facts, and "facts are chiefs that winna ding, and dare not be disputed," and history are against the phrenological assumption that large heads are essential to success, and that it is only large heads which make headway in life, and that small heads are but in a small way. Doubtless a number of harder nuts than these might be given to phrenologists to crack their craniological teeth on.

"The art of reading heads, based on the size of head of different individuals, is almost as valuable as gipsy fortune-telling, and as equally reliable, and should be treated with the same consideration at the hands of the magistrates," &c., &c. The preceding pseudo-scientific gibberish is continually thrown at the heads of phrenologists, and believed by many intelligent people who know no better. The majority have only average-sized heads, and the assertion that brains are essential to success is offensive. The preceding nuts have been cracked again and again and their hollowness exposed, still they are presented again and again in the papers as a death to phrenology, and, I presume, phrenologists.

Now what are the facts? Cuvier, Parry, Captain Cook, Washington, and Gambetta, were large-headed men, essentially so in those parts most manifested in their lives. Lord Chelmsford is a small-headed man; had he not been a lord, would be, and is, a respectable nobody. Intellectual greatness or brain power is not essential to make the musician. Blind Tom was a musical genius and an idiot. An artist or a poet may possess marked ability in their particular lines, yet in the practical, intellectual requirements of every-day life be a "noodle." An accomplished gentleman—lady's man—may sing, play, draw, and dance to perfection; be a "perfect darling," and yet have the "hen's head of the fool." This specimen of the *genus homo* generally wears an eye-glass, carries a stick, and wears his hair split in the centre. Scotchmen are universally known for their shrewdness, cautiousness, plodding industry, and practical common sense; they make headway wherever they are throughout the world. This is a noted fact. I will give you another fact. The successful Scotchmen at home and abroad are large-headed men. The Highland saying, "a large head on a wise man, and a hen's head on a fool," hits the nail on the head (the average measurement of the Scotchmen is half-an-inch greater than the English, or even the Irish head). In the Senate, or

Parliament; the Church, or the Army, who are the leaders, *de facto*? Men with large heads. I do not say all large-headed men are great, *but I do say all great men are large-headed*. This cannot be contradicted. Lord Byron was great (?) say rather notorious and great in weaknesses. His *hereditary* was unfortunate—a nervous, selfish, hysterical being, with all the weeness of a pampered, spoiled girl. He possessed little or no breadth, manliness, or largeness, about him. He was a poet, and his soul was as big as his head. Sir Walter Scott—well, his character corresponded with his head—a tenacious memory, dramatical and poetical genius, and as stubborn as a mule. Gambetta was large in the base of the brain, giving power, executiveness, language, memory, social power, and influence, but sadly wanting in height of head and of moral power. His smallness of brain, therefore, was just where his character was most deficient.

A man might have a large and powerful brain, yet be wanting in the length and depth of the superior anterior lobes, and therefore of reasoning power, or in the inferior anterior region be defective in perceptive power, and memory of events and details. A man with a small head, with a good verbal memory and language, may be a good reader and pass for a man of ability; but the measure of his ability would be his power to “crib” and retain and reproduce the products of other men’s brains. The phrenologist in reading character does not depend upon size merely, but upon form and quality, giving, of course, due consideration to the temperamental conditions. The average male brain is twenty-two inches in circumference, and the female brain an inch less. The artistic sense of proportion must be exhibited in form. The rule is, a fine head, a fine mind; a beautiful head (not to be confounded with a beautiful face) a beautiful mind; a small head a small mind. With Dr. Donovan I assert, “It is not cleverness in any particular department that makes the man. We must view him as a husband, a father, a citizen, and see how he carries himself in these relations. We must take account of him, too, in his moral and religious aspects. Then only can we sum him up and ascertain his value.

“It is not denied that a man with a twenty-one-inch-round head measurement may be amiable and clever in some respects, but it is denied that he can be of any weight or generally superior power, or possessed of talents for any of the learned professions (we have known gentlemen engaged in the medical and legal professions with twenty-one inch brains—society suffers), or that he can live through a long life and preserve a steady and animated character. As to a

male head only nineteen inches in circumference, this is more or less idiotic, be its form what it may." Too much brain is as bad as too little, especially if massed at one particular point, leaving the head unbalanced. Cogly top stories, and overhanging foreheads, are to be depreciated because of the "whims" and impracticalities of the possessors.

Necessarily much more might be advanced, but I am afraid I have already taken up too much room in your valuable journal, and may have already given too much offence to the small-headed individuals, who conclude there is "nothing in phrenology, you know."

THE HYDEBOROUGH MYSTERY.

A TALE OF A GREAT CRIME.

BY CAVE NORTH.

CHAPTER XXVI.

THE TRIAL.

When the time for the assizes came round Mr. Rice was almost as far as ever from the result he wished to arrive at; although he was still as certain as ever that he was on the right track; but his luck had been against him, as it sometimes would be against the luckiest. Mr. Rice cursed his luck. He had hoped to create a sensation in court by producing the very man for whose murder Pennyfold Drupe was on his trial. However, the fates, or his luck, being against him, there was nothing for it but to submit with the best grace possible under the circumstances. He still hoped, however, that something might turn up in his favour. It would be the second, if not the third day before Drupe's case came on, and it was expected to last at least two days; so that the detective thought he might safely reckon upon two, if not three, days more in which to prosecute his inquiries.

But, contrary to his expectation, Pennyfold Drupe's case was reached on the second day. Every part of the court, the vestibule leading to it, and the precincts of the Court House, were crowded with people, all eager to hear as soon as possible—either at first or second hand—how the great trial was going on. The disappearance of Mr. Softly had created so much stir that public curiosity was intensely excited; and the Bench was thronged with fine ladies and spruce gentlemen loth to let slip a chance for the enjoyment of a real blood-live drama. The newspapers had spoken of the trial as likely to be quite sensational, and that curiosity which never needs much arousing where a story of keen human passion is concerned had been raised to its highest point. So gentle and simple crowded to see the supposed murderer—a young man of but twenty-five,

handsome, learned, and talented (as he was reputed to be)—and to watch the development of the evidence whereby the crime would be brought home to his door, or his innocence be established. What a fine, nerve-tingling sensation! And the young lady, for whom he had committed the act, she, too, would be in court, probably as a witness; though there had been rumours current the last day or two to the effect that she might find herself in the dock by her lover's side as an accomplice. What play could be better!

Everybody had his or her place long before the prisoner made his appearance. Letitia was there, looking pale and anxious, but as beautiful as ever; Jacob was there with his everlasting grimace; John Henry was in a front seat (Miss Goosey was not able to be present on account of Mrs. Softly's condition); the mother of the accused was there, seated between Mr. Marshall and Mr. Lake, the solicitor for the defence; Dr. Gribble was present, wearing his best antiquarian air; Job Caudwell, too, was there with his ready pen, making a note of all interesting points, in order that, with the garniture of phrase and metaphor, he might give the readers of the *Observer* a readable account of this romance in real life, as he was pleased to style it.

Exactly at eleven o'clock there was a murmur of expectation in court; every neck was stretched eagerly forward in the direction of the dock, and while the usher was making the loudest possible noise to command silence, the prisoner rose to view in the dock. Every eye was fixed upon him; but after one rapid glance round the court the prisoner's eye rested on the face of the one upon whom, more than any other, depended his fate—the judge—who, in his turn, seemed for a moment or two to scan critically the features of the accused. The latter was looking somewhat pale, as was to be expected after so many weeks' confinement; and the effect of this palor was heightened by his habiliments, he being carefully dressed in black, as became the solemn occasion: but he looked calmly, and even frankly, and with unabashed brow, upon his judges and accusers.

For a second or two there was a murmur of applause, which was instantly suppressed; but it was enough to show how deeply the prisoner's first appearance had impressed the audience. Had his rival been present (as he was not) he would probably have felt some qualms of regret for having brought his victim into his present position: assuredly, could he have seen how much he had been the means of raising him in the eyes of the lady in whose regard it was his sole object to degrade him, he would have keenly regretted his act.

That young lady, on beholding Pennyfold's calm and dignified behaviour in so trying a situation, was moved with admiration: at that moment she saw into depths of his character that she had never before fathomed; previously he had been to her as a boy; now he was a man; and now for the first time probably she conceived a real love for him. Had any one been privileged to see beneath her

veil, they would have seen tears trickling down her cheeks; but none could have ever heard the words whispered to her own heart—

“Oh, my Pennyfold! my hero! how I and they all have misjudged you!”

Good and angelic as these beings are it is sometimes good for them to be worked through the mill.

At first Pennyfold had not dared to trust himself to look directly at his beloved, although he had seen her from the moment he entered the court. Between her and his mother, to note whose anguish-wrought face had terribly shaken his tranquility, his power of self-command was greatly tried. The proud matron never once looked at him, but sat erect and cold; although her quivering lip told of the struggle within.

Meanwhile, the formal business of swearing the jury, etc., had been concluded, and the accused had answered the query as to whether he pleaded guilty or not guilty with the words: “I am not guilty,” uttered in clear, distinct tones. The various witnesses were then duly examined, and afterwards examined by the counsel for the defence; all of which it is needless to go over in detail.

The sensation of the day was caused when Mrs. Softly's evidence (taken by commission) was read; wherein she stated that she remembered one occasion on which she and her husband had had some conversation in the library about Pennyfold Drupe's surmised love for Miss Softly, when for certain reasons something was said about discouraging the attachment; and the sensation was greatly augmented when Mary Radley got up into the witness-box and described how she had overheard the said conversation and had repeated such portions of it as she remembered the same night to Miss Softly.

At this stage of the proceedings the court adjourned.

Shortly after noon Mr. Rice had received a telegram from Ferret which took him away as soon as he could be spared. The dispatch was to the effect that his lieutenant had discovered a positive clue to the mendicant's whereabouts. How the discovery was made it does not concern our story to relate; suffice it to say that Ferret had learned that an old man resembling the mendicant had on or about the day when he left the house in Finkel Alley been taken to a house in Steveden, a village on the Backbone hills, about thirty miles from Homcaster, where he had since been living in great seclusion.

Late that night Rice met Ferret at the nearest railway station to Steveden. It was a cold, gusty night, and after exchanging a few words together the two men mounted a dog-cart and drove away into the fitful moonlight.

It was a weary night for the little household of Hawthornden. In spite of herself, and her unswerving theory of sin, Mrs. Drupe began to have doubts about her son's guilt; her maternal feelings were too strong for her theological convictions; and she found herself wavering. “Was she wronging her son? Had she done more or less than her duty?” These were the questions she asked herself.

She had asked herself them on her way home; she had kept on asking them over her frugal meal; and again in the privacy of her bed-room, on her knees, she asked them again. "O Lord, show me the way!" she pleaded; and ever before her stood the image of her son—proud, and with unflinching courage in his calm eye.

Agnes, meanwhile, was with her patient, who, it was thought, was fast sinking. The old gamekeeper seemed a little more composed in his mind to night, and as he sat by the fire in his arm-chair, wrapped in his great-coat, he asked how the trial was going on and what chances Pennyfold had. Agnes shook her head and wept. The old man drew her to him, and stroking her brown locks, said—

"Thee loves the lad, doesn't thee, deary?"

Blagster was from a more northerly county.

Agnes laid her head on the old man's shoulder and sobbed.

"Doan't 'e cry, lovie! doan't 'e cry! It'll be all right yet—it'll be all right."

Tears ran down the old fellow's weather-beaten cheeks.

"There, hush, deary, hush! It breks my heart to hear 'e sob like that—it do, indeed! There"—as she quietened down a bit—"there now, that's a good lass! Now harken. They shan't hurt him; they shan't hurt a hair o' his head. He war ever a good-natured lad war Penny; an' if I can say or do aught can help him, it shall be done—that it shall! There! go now"—after a pause—"it'll be all right. Bridget will be here; and be sure and come and see me to-morn. Good-night, deary! an' doan't 'e tak' on no more about th' lad; they shan't hang him for that job."

Shortly after Agnes had gone, and was crying herself to sleep in her little bed, Bridget found Blagster still sitting in his chair by the embers of his fire. Bridget busied herself about the house, making up the fire, preparing the bed, etc.; to all of which operations the old man seemed oblivious. At length Bridget approached, and asked him if he had not better go to bed; he replied with a shake of the head, murmuring that he was expecting company.

"Company to-night?" exclaimed the woman.

"Is it late, Bridget?"

"After ten."

"How's the moon, Bridget?"

"It reaches the full about two o'clock."

"I shall be ready by then."

"What mean ye by that, master?" asked Bridget.

"Maybe me mind's a bit wandering to-night, lass; but that doesn't signify; shall be all right to-morn. I thought just now as I saw me poor old mother come in at th' door and beckon me: it war just like her, poor soul; one gets sich fancies when a bit out o' sorts."

"You seem main heavy to-night, master; maybe I'd better stay with you."

"No, no, Bridget! get your rest—get your rest. Me mind has been running a little wild-like to-night, as it will sometimes; but it'll be all right to-morrow. No, doan't ye miss your rest, Bridget."

"Well, then, I'll just back up the fire a bit before I go," said the woman; "the nights get quite chilly: an' if you want for anything just knock at the wall an' I'll be in in a jiffy."

"I will," said Blagster; "an' if you doan't mind you may put the pen and ink on the table, and a bit o' paper: I will want to write a two-three words maybe."

"La! I'd let writing be till morning, I would; it'll surely keep," said Bridget.

"Nay; it mun be done to-night," replied the old man, eagerly; "I promised Agnes."

"Well, if you must, you must," returned Bridget, laying the writing materials at his elbow; "but you'd better let me help you to bed, master."

"Thank ye, Bridget—thank ye! You're very good; but I mun do this bit o' writing; then I'll rest—afore that I cannot."

When the woman had gone, the old man turned himself about painfully in his chair, took paper and pen, and, with an effort that seemed to cause him extreme anguish, wrote a few lines; then, after looking at them fixedly for a minute or two, he enclosed them in an envelope, closed and sealed it, and then, after laboriously writing an address upon it, sank back in his chair. What an agony those few lines had cost him was evidenced by the beads of perspiration that stood on his brow; but, the work done, a faint smile flitted across his lips, and he murmured—

"There, Agnes! That'll do it! that'll do—!"

Presently he seemed to fall asleep: the lamp burnt low and dim; and the moon, grown to the full, shed a stream of light through the window and illumined his still, pallid features.

CHAPTER XXVII.

DEAD.

Mr. Rice and his companion drove rapidly along the rough road they had to travel without exchanging many words. After proceeding for about an hour they reached Steveden, where they pulled up in front of a small inn. Leaving Ferret and the trap there, Rice walked up the village street alone. A couple of hundred yards brought him to a house standing by itself a little back from the road. It had a small porch in front, was well hidden by shrubbery, and was flanked by a drive and a *porte cochere*. The detective reconnoitred for a minute or two and then, finding the carriage doors open, made his way cautiously to the back of the house. A light was streaming through the closed shutters of one of the lower windows; by placing his ear to which he could hear a murmur as of several voices; but nothing distinctly. Presently there appeared to be a movement towards the door; Rice stepped back under the shadow of a large pear-tree which occupied the centre of the court. The door opened, and three figures appeared—a woman holding a candle over her head, a man in his shirt-sleeves, holding a stick in

his hand, and another man, taller than the other, wearing a wide-brimmed felt hat and a thick ulster coat that muffled him up to the ears.

As the latter stepped out of the door, the light being behind him, Rice did not see his face; but he immediately turned round and stood sideways to the door, thus exposing to view a profile, the sight whereof gave the detective as sharp a shock as he had perhaps ever received: there was no mistaking that nose and those eyes.

"Fangast or the Devil!" he ejaculated, under his breath.

As the three stood at the door Rice heard the fag end of a conversation which ran somewhat as follows—

F. or D.: "It's a bad business—bad for all of us."

Man: "It'll maybe come out all right yet; he can't have got far anyhow, seeing he hasn't taken th' train."

F. or D.: "But he's had a day's start of us, and that is a good deal, even for an old beggar like him."

Man: "Well, we must lose no time, but have the country scoured. I bet he won't escape us."

F. or D.: "I don't know that, if, as you say, he has got his reason back. There's where you made the mistake, not to let me know of his getting better—you, and Martha, too: when did you see them last?"

Man: "About a week ago; they generally drives over once a week."

F. or D. then abruptly took his leave and walked towards the gate, followed by his companion, the woman going within. At the gate the two exchanged a few words, in an undertone, and parted, Fangast taking his way up the village street. The man, whom Rice had heard the woman call Steggit, watched the muffled figure for a minute or so as he walked up the street and then began to close the gates; but ere he had done so Rice stood at his elbow, and accosted him with the words—

"Who is he that left you just now?"

Steggit started, and for an instant gasped for breath; but, quickly recovering his self-possession, he replied insolently: "What is that to you?"

"It may mean a good deal to you if you are not civil," returned Rice.

"O, may it? And who be you, pray, a-stealing into one's premises at this time o' night? Maybe you'll answer me that?"

"Yes; I'll do that," replied Rice. "My name is Rice, and I am a detective. Don't be unnecessarily alarmed. Perhaps you would like to know my business? I am on the track of a man named William Softly, of Hydeborough, whom you have been conspiring to hide from his friends."

"Conspire to hide! William Softly! What do you mean?" exclaimed Steggit, surprised, or feigning surprise.

"Come, my good fellow! that's all very well; but it won't do with me," said Rice, coolly.

"Well, if it won't, perhaps this will (raising his stick); an' if you don't get out o' that gate double quick I'll help you out, you——"

"Stay!" said Mr. Rice, producing something that looked uncommonly like a pistol and holding it very close to Steggit's face; two can play at that game: so! (as the stick dropped helpless). Now perhaps you will answer my question: Who was it that left you just now?"

"Mr. Jeremy: he is from Homcaster, I believe."

"About whom was he talking with you when you came out of the house—some one who had made his escape?"

"Mr. Finkel."

"That is not his real name."

"I know no other."

"Look here," said the detective; "it will be to your advantage to be straightforward with me and tell me what you know. This man's real name is William——"

"I know nothing about any other name, except that he has called himself by two different names since he came here: one was Winthorp; the other I forget: I was told his real name was Finkel, and that's all I know."

"How long has he been with you?"

"Above two months."

"And he was brought here by the Thumkins?"

"Well, no; they brought him as far as the station."

"And who paid you for the job—that is, for the old man's keep?"

"This man here."

"Jeremy?"

"Yes."

"Did you ever hear the party call himself Softly?"

"I can't be sure; but the other name he called himself by was something like that."

"Well, it does not signify," said the detective; "I have pretty good evidence to prove that he is the man I seek; and the best thing you can do to save yourself is to help me to find him. Are you prepared to do so?"

Steggit agreed without more ado; and, after the detective had extracted from him all the additional information that he could, he instructed him where to telegraph to in case he heard anything as to the missing man's whereabouts. He was certain that he would act up to his agreement, for one reason, because he was thoroughly frightened; and for another, because he showed him that by being the means of restoring the gentleman to his friends he might make more than by being his custodian. Thus the fear of punishment, coupled with the hope of reward, served him in the place of conscience.

An understanding having thus been come to, Steggit invited the detective into the house to take a drink, which was gladly accepted. Rice took the opportunity to put some questions to Mrs. Steggit; from whom he learned some particulars about their recent lodger

that were highly important. At first she said the old man had complained much about being taken away from his post on the bridge, where he said he had been placed by the Almighty as a penance for a great sin done in his youth. When asked what his great sin was, he had replied that he and a companion had once gone out boating on a Sunday, and that his companion had lost his life, while he, through God's mercy had been spared, and had been raised to affluence, but only to fall into the greater sin of pride. At other times he told a different story; saying he had committed the same sin for which the boys in the Bible narrative were torn to pieces by bears. At first he had been very persistent in calling himself by the name of Winthorp, when he spoke of the boat accident; but afterwards he stated that it was Winthorp who was drowned.

After the old gentleman had been with them for about a month, the woman further stated, he began to show signs of a change; he spoke less, went about more, and seemed to be absorbed a good deal in thought. One day he surprised her by saying that the village was the home of his early childhood, and pointed out the cottage where he said he had been born. She took none of these things as signs of returning reason—but the reverse. During the last week he had been very shy and quiet, and she supposed that he had been meditating his escape.

From the old beggar's hints about his wealth, his confusion about his name, his making off, etc., Mrs. Steggit imagined that he had gone still more hopelessly insane. Rice was inclined to take the same view; and from the circumstance of his having complained of being taken away from his begging place at Homcaster, he thought he might have made his way back there. He and Ferret therefore, in the early morning, set out for that place, making diligent inquiry by the way for the mendicant. At a little way-side station they learned that an old man of his description had the previous day taken the train to Homcaster. Arrived there, they made every possible search, but in vain. Shortly before noon the detective was obliged to give up the search; it was necessary for him to get back to Hydeborough. He would be there before the close of the trial, and might arrange for an adjournment, pending the discovery of Mr. Finkel, alias Winthorp.

His thoughts as he journeyed southwards were not of the cheerfulest. There was still room for the gravest doubt whether the mendicant, whom he had been pursuing so restlessly, was really Mr. Softly; but supposing he were to get a postponement of the trial for the production of this man, and he were, if found, to turn out to be anybody but the right man? How he would be laughed at! He must seek Fangast when he reached home, and, if returned, make him own up. But supposing he was still in pursuit of the escaped lunatic, and should find him, and proceed to still more violent measures against him? Well, if he should, thought Rice, he would find him implacable.

Meanwhile, the trial was taking its course. The anxious mother

sat there with pale, compressed lips, and an agonised look, drinking in every word, watching their effect upon judge and jury, and anon turning to wonder at the calm untroubled brow of her son—her boy so lately: but, oh, how soon those boys grow almost out of all recognition! Could that be her son of a few months ago? And was that calm of his the calm of innocence, or was it the effrontry of vice? The poor woman felt as though it was a horrible nightmare she was going through, and not a real experience. She could hardly conceive that she could be sitting in an actual court, and that her son was there in body on trial for his life. The truth is, the terrible strain upon her feelings had half dazed her, so that she seemed like one in a semi-hypnotic state. Every now and then she looked round with an expectant air; she was under the impression that Agnes was to come and break the spell that was upon her.

That young person had given her a slight “turn” before she set out for the court, and indeed had delayed her somewhat, and been unable to accompany her. After a restless, anxious night, Agnes had got up feeling limp and powerless; was unable to eat any breakfast; did not know whether to laugh or cry; and finally settled the matter by slipping on the floor in a swoon. Bridget was summoned; and when Agnes had come round a little Mrs. Drupe started for town without her. When she was thoroughly recovered Bridget said—

“Now, Miss, if you feel better I will go and see Blagster; the poor man has been clean forgotten in the general upset.”

Agnes said she was now quite well and Bridget might go to her patient with comfort; but she had hardly been gone three minutes ere she returned in haste, exclaiming—

“Oh, Agnes! he’s dead!”

It was but too true.

There he sat in his high-backed chair, stark and cold, just as he had thrown himself back after writing his letter, which still lay upon the table. For some time no one gave any thought thereto, so much was everybody’s attention taken up with the dead. After awhile, however, Mrs. Wardroper (the landlady of the inn) took the missive up, and, noticing that it was addressed, “To the Judge, County Hall,” said—

“Poor man! he must have been wandering in his last moments: I wonder what he can have been writing to the judge?”

Agnes’s attention having thus been drawn to the letter, her last conversation with the old gamekeeper occurred to her; a light seemed suddenly to break in upon her, and with a cry, half of pain, half of joy, she seized the missive, and crying: “I must take it! I must take it!” ran out of the room.

Pennyfold took but a languid interest in the defence that was being made in his behalf. Knowing how wide of the mark the whole thing was, how could he? What did interest him, and what almost wholly occupied his thoughts, was the love that had brought all this trouble upon him. He was thinking: “If I am to die, I could die happily with but one sign from her; whereas, if I am to

live, that life would be worse than death without that sign." But, as he glanced up at her where she sat, by her father's side, with her face closely veiled, signless, and almost motionless, he muttered to himself, "Cold heathen! She is not worthy of a true man's love!" But hardly had the words shaped themselves in his mind ere he gave himself the lie, saying: "Ah, sweet Letitia! a thousand times worthy!" Your real lover is a strange animal.

In opening his defence Mr. Lake told the jury that, while there were many curious circumstances connected with the case that seemed to point to the prisoner as the murderer of Mr. William Softly; yet he thought he should be able to convince them that the young man before them was no more a murderer than any one of them. Then he proceeded to describe Drupe as he had been known to his family and friends before this unfortunate suspicion came upon him. A steady, thoughtful, industrious young man, a diligent student; nay, more, deeply read in the two subjects to which he had given his special attention—botany and chemistry. In respect to the latter, indeed, he believed he was within the mark when he said that the accused was on the point of a new discovery that, if perfected, would benefit the whole world. He had even given his thought to the subject while in his prison cell, and had made such advancement, that he only needed to be placed in his laboratory to put the finishing touch to what had occupied his attention for several years.

But while the young man before them had been thus diligent as a business man and a student, he had not been impervious to the shafts of Cupid, etc., etc. And the very evening on which he and his uncle last met, and on which his uncle was last seen, he had seen him for the sole purpose of making known to him his love for his niece, and asking his consent to their engagement; and the old gentleman's last words to him were to appoint a meeting on the morrow.

He would ask them if such a man was a likely one to commit a murder? And if he had decided to do so, would he be likely, in the first place, to leave the old gentleman's coat and hat on the canal bank, and then, having disposed of the body in the wood, taken and destroyed, or otherwise put out of the way, almost every vestige of clothing but a pair of gloves and a spectacles-case? It was not the way even the most ordinary criminals went about the work of murder. But he believed, and he hoped to succeed in making them (the jury) believe, that there had been no murder, and that the body, or rather skeleton, which had been found in Hockley Wood, was really the skeleton of a woman.

The prosecution had endeavoured to make good a lame case by trying to prove that decomposition had been hastened by throwing lime over the body when buried; but he should be able to produce a witness who would tell them that the supposed lime was nothing but chloride of lime, the effect of which would be to actually delay decomposition: so that the skeleton which had been brought forward

as that of a man presumed to have been murdered a year ago must, to have become denuded of flesh to that extent in contact with chloride of lime, must have been buried between two and three years, if not longer, etc., etc.

Mr. Lake was willing to stake his whole case on that one fact. However, as there was one point on which the prosecution laid great stress, the statement, namely, of the woman Radley, that the prisoner knew of his uncle's objection to his marriage with his cousin; in which circumstance the prosecution found a sufficient motive for the crime of which the prisoner was accused; he should therefore call one witness, no other than the cousin herself, to deny that the said knowledge ever caused her lover to entertain the slightest ill-feeling towards Mr. Softly.

It is needless to recapitulate the whole of the evidence. Suffice it to say that Dr. Gribble detailed at great length his reasons for believing the skeleton was that of a woman, his chief one being the smallness of the skull, the shape of it, the smallness of the hands, the breadth of the hip-bones, etc. He granted that, if the skeleton was that of a woman, she had been a woman above the ordinary size.

Finally, Letitia was placed in the witness-box, her appearance causing quite a sensation in court. She showed great agitation at first, and fairly broke down under Mr. Lake's examination; nearly causing Pennyfold to break down too—a catastrophe which he only averted by digging his teeth into his lips. Then the judge came to the rescue; first calming her by a few gentle words, and then putting to her half-a-dozen questions that brought out the exact information which the court wanted. When did she first learn that her uncle was against the growth of intimate relations between her and her cousin? When did she tell Drupe? What effect had the information upon him? Did he counsel that they should keep their mutual affection a secret? Did he ever express any ill-will towards his uncle? etc.

To the two latter questions Letitia replied that, so far from her cousin ever having counselled secrecy, he was always opposed to it, and it was only at her earnest solicitation that he finally consented to keep the matter to themselves; while, as to his having shown ill-will towards his uncle—"My Cousin Pennyfold," she said (and her voice came out with a clear, distinct ring as she spoke)—"My Cousin Pennyfold was always too good and too brave to entertain an ill thought towards any one."

A murmur of applause ran through the court at these words; while as for Drupe, he saw the court for a moment or two through a shimmering haze of tears.

To be continued.

THE last best fruit which comes to late perfection, even in the kindest soul, is tenderness toward the hard, forbearance toward the unbearing, warmth of heart toward the cold, philanthropy toward misanthrope.—JEAN PAUL RICHTER.

DR. NEWMAN HALL

Has a favourable physiological organization for mental and physical action. He turns what vitality he has to the best account; for, instead of devoting himself to animal and physical pleasures, he engages in moral and intellectual enterprises, and in such physical labours as are calculated to be of benefit to himself and others. He has the organization of a hard worker, and is in his element when he has something to do. He has a predominance of the mental and motive temperaments, with an average of the vital; more of the latter would give him a warmer and more emotional nature, thus enabling him to act upon the feelings and impulses more easily, and thereby create more enthusiasm and excitement. His mind is intense and quick in its operations, and his thoughts and feelings are clear and distinct; hence he has many internal sources of enjoyment and suffering. He is characterized for earnest, sincere, and devoted effort rather than for spasmodic, impulsive, excitable actions. His influences are calculated to elevate and improve rather than to excite and stimulate. His brain and nerve-power predominate, and will probably wear out the body. His ambition, reasoning intellect, moral and religious faculties have the ascendancy, and take the lead in his mental operations. His social brain is active and easily called out when among intellectual and cultivated friends and kindred spirits; but he has other and greater sources of enjoyment than to mingle in the social circle in the ordinary way without reference to the culture of his associates. He has the executive brain fully developed, yet his nervous energy is greater than his physical force. His mind makes his body do what it otherwise would not do. He has great will-power; what he wants he wants very much, and can put forth great effort to accomplish his ends. The faculties in the crown of his head have powerful influence on his life and actions. He is anxious to excel in everything he does, and is keenly sensitive about being criticised as to his character and motives. His great aspirations may lead him at times to take too much on his shoulders, for if there is work to be done he is willing to do more than his share; he easily makes personal sacrifices for the purpose of doing good, and works as hard for the benefit of others as for himself. His mental temperament favours the use and development of his reasoning organs rather than his perceptive faculties. He is more fond of philosophy and moral science than of the study of physical

science ; is more interested in mind than in matter ; in laws as applied to morals and ethics than to practical scientific demonstrations ; in literature and scholastic subjects than those pertaining to the material world. All his physical and mental movements are easy. He is equally in his element when he is walking or thinking ; but he is able to think best when he is walking, especially if alone, for in proportion as his blood is in good circulation will his mind be clear and active. In consequence of the vigour of his brain and health of body his memory is good of those things and subjects to which he pays attention, especially of thoughts and literary subjects. He is original in his thoughts, fertile in his plans, and is well qualified to make the most of his subject. He has scope of mind, a fruitful imagination, and readily devises ways and means to accomplish his various ends. His talents are equal to the task of gaining a position, and of sustaining himself in it, and in doing a great amount of varied work. He is well qualified to appreciate mental culture and advanced stages of education and mental discipline. He lives on a high plane, and is prepared to appreciate men of genius. The whole coronal brain is largely developed, and his head is high, which indicate that he has moral power and a religious spiritual nature.

L. N. F.

Poetry.

LOVE AND PEACE.

One sang of love beside a golden river :
 Ah, how he sang, the happy, beaming child !
 His whole ecstatic being was a-quiver
 With soft emotions that his soul beguiled.

“Love ! love !” he cried, and twanged the golden lute—
 “Love, love ! O love ! I worship thee alone ;
 Only to thine—to thine—the golden fruit
 Of joy unending in celestial zone !”

The river warbled o’er its golden sand,
 And bore along the rapt child’s festive tune ;
 The willows lispt it to the listening strand,
 And men and maidens dreamed of endless June.

One sang of peace beside the deepening water—
 One ripe of years and sober in his mien :
 “Peace ! peace !” he chirpt, “sweet Contemplation’s daughter,
 Thee only woo I—thee—to be my queen !

And as he sang all in an undertone—

“Peace! peace! dear peace!” and wooed the pensive child,
He chanced upon the youth that sang alone,
Who smiling sang and singing ever smiled.

“Oh, idle youth,” he said, “leave off thy quest !

The world is weary of thy antic song—
The world is weary and it fain would rest :
Peace, only peace, endureth leal and long !”

Book Notice.

There has of late years been manifest a growing interest in the related subjects of physiology and the outward expression of emotions, and Dr. Francis Warner's *Physical Expression* (London: KEGAN PAUL, TRENCH, & Co., 1885) is probably the latest treatise on this science. In reviewing the past history of the subject, Dr. Warner might have recollected that it was the enthusiastic phrenologist, George Combe, who described a man's walk as “the natural language of the faculties,” and saw in the way in which a man carried his body a good deal of the ballast with which his mind was weighted. Dr. Warner, however, recognises that permanent impressionability (or retentiveness) may be expressed by a reflex action; not necessarily a process of evolution, but giving a tendency to resist change. Physiologists, like Sir Charles Bell, Henry Siddon, and Professor Bain, have already shown the relations existing between the nerve centres and the muscles, by which feelings are made apparent to the outside world; and Dr. Warner sets himself to analyse the different physiological meanings to be deduced from the action of various parts of the body. The most interesting chapter to our mind, not excepting that on art criticism, is that devoted to a study of the hand; a member into which the ancients in their sculpture contrived to throw an amount of expression which our modern artists, sculptors, and painters, with rare exception, seem alike incapable and careless of conveying. There was a tradition extant in Zurich within the present writer's recollection that Lavater first recognised his power of divining character whilst making the Sunday collections in the church of which he was one of the consistorial body. As junior deacon, the lot often fell to him to go round with the collecting bag, and he maintained that in nearly every case he could sketch the outlines of the almsgivers' character by the shape and movements of their hands. There is no doubt much to be taught in this science to art students; but so long as they neglect the fountain head of all true art,—the Greek statues, it is expecting too much to look for other than conventional hands and tapering fingers. In dealing with the expression of the human face, Dr. Warner insists very naturally upon the necessity of balancing different modes of expression, without which all attempt to render emotion runs the risk of becoming

only caricature. It is, however, strange that he should make no reference to the very remarkable experiments on muscular expression made by Duchenne of Boulogne, to whose elaborate investigations the artistic no less than the scientific world owes a debt of gratitude; whilst M. Duval's text-book on artistic anatomy does not even obtain a place in his bibliography.

Facts and Gossip.

A MEMBER of the French Academy of Medicine presented the other day to his colleagues two mites of humanity of whom he is legitimately proud, for the fact that the couple of wee infants, each of which could be held up for view in the joined palms of his two hands, were alive and strong enough to utter cries, is a proof of the success that has attended his efforts to rear prematurely born babies. The tiny specimens of our race which excited the admiration and curiosity of the Academy of Medicine came into the world some six weeks ago, one four months, and the other four months and a half, it is estimated, before they were due. They weighed at their birth a trifle over a couple of pounds each, and had so little vitality that they only just escaped being still-born. The infants, however, did just breathe, and the spark of life was not allowed to become extinct. They were placed in an artificially-heated receptacle known as a *couveruse*; their fragile bodies were nourished by artificial means, until, under constant care and attention, they are now, at the expiration of six weeks, able to take the breast, and will, it is believed, survive the accident of their extremely premature birth. One of the infants has lost flesh since it came into the world, weighing, after six weeks' care, less than the original two pounds; the other—the stronger of the two—can now boast of three pounds in weight; but the fact that on the day they were shown to the members of the Academy of Medicine both cried—and lustily for their size—is looked upon as a favourable symptom of their vitality.

LONDONERS, and above all Parisians, must hope that bacteria are not such dangerous animals as they are sometimes said to be by their enemies: for the air of large cities is full of them. The proportion of bacteria in a cubic metre of atmospheric air is, according to M. de Parville, writing in the *Journal des Débats*, 0.6 in sea air, 1 in the air of high mountains, 60 in the principal cabin of a ship at sea, 200 on the top of the Panthéon, 360 in the Rue de Rivoli, 6,000 in the Paris sewers, 36,000 in old Paris houses, 40,000 in the new hospital of the Hôtel Dieu, and 79,000 in the old hospital of the Pitié. It is gratifying to know that in Ryder Street, St. James's, a cubic metre of air (taken from the open street) contains only 240 bacteria, whereas in the Rue de Rivoli the same quantity of air contains 360. The superiority of London air as compared with the air of Paris is shown not only by its containing fewer bacteria, but also by the rate of mortality being smaller. The greater purity or lesser

impurity of the air of London is accounted for by London being nearer than Paris to the sea, by its covering a greater extent of ground in proportion to the population, and by its houses being lower. Old houses are all, according to M. de Parville, haunted by bacteria and the ghosts of bacteria; and he addresses an opportune warning to persons who at this time of year go to the seaside and, instead of passing their time on the sea-shore, where the air is all but absolutely pure, remain the greater part of the day in the interior of some ancient lodging-house inhaling bacteria, which, when a house is not only old but also densely inhabited, infest the air in incredible numbers.

UNDER the head of "Our Ancestors" a correspondent of *Nature* sends the following communication: "During eight centuries—say to the time of the Norman Conquest—one's direct ancestors amount to a far greater number than would at first be contemplated. Taking three generations to a century, one has father and mother (2), grandparents (4), great-grandparents (8). At the end of the second century the number of ancestors springs to 64. Following the calculation, you will find that at the end of eight centuries one is descended from no less than 16,000,000 ancestors. Inter-marriage, of course, would reduce this estimate, and there is no doubt it must have largely prevailed. But the figures are so enormous that, in spite of all, I venture to suggest that the words, 'All ye are brethren,' are literally true."

ONE of the treats of the past season in London has been the illustrated lectures on American scenery, by Mr. H. W. French, of Boston. Mr. French and his lectures are well known in the States, and wherever he goes he draws large audiences; but this was his first visit to England—at least with his "Show." If rumour, however, be not false, it will not be his last visit. It is not perhaps much to say that Mr. French is an orator, because all Americans are, especially all fair Americans; but Mr. French is a particularly cultivated one; so that we may listen to him for an-hour-and-a-half—the usual length of one of his lectures—without the least weariness. This is attributable, however, as much to his matter as to his manner; and no one who has once heard him will be satisfied without going a second time. One of his descriptive lectures is a journey of pleasure as well as of instruction. Mr. French introduces his hearer to all the chief places in the United States notable either for their beauty or their historical associations, beginning with Boston and its literary lights, and finishing in the far west at San Francisco, taking a glance on the way at the icy north. The lime-light illustrations of the lectures are the finest thing of the kind it has been our pleasure to witness. The worst thing we can say of Mr. French's lectures is that they stir up an almost unquenchable longing to see the originals of which he gives us so charming a counterfeit: still, any man who helps to make one side of the Atlantic know better the other does a public service to both.

CALMNESS is not insensibility, though many people confound them. A girl is not hard-hearted and unfeeling because she can witness painful sights, and if need be lend a steady, firm hand to the doctor or nurse. On the contrary, she has usually twenty times the sympathy and unselfish kindness as that delicate little damsel who has no command whatever over herself, and fills the room with shrieks, winding up by running away the very moment an extra hand might be useful. It may seem harsh to say so, but those dainty bodies, who are so utterly useless at any emergency, or, as their friends plead, "so highly endowed with sensibility," are generally selfish and self-absorbed to a degree utterly unintelligible to their more sober sisters, who are taught to forget self and control both mind and body by their large-hearted sympathy with, and comprehension of, suffering.

THE art of prolonging life is as yet very imperfectly understood ; but some valuable hints on the subject are occasionally to be picked up by noting the habits of those who live beyond the usual period allotted to human existence. A very old man, aged 94, named Thomas Penrose, died the other day at his farm, near Blandon, in Pennsylvania. The last words he uttered on his death-bed were as follows : "Tell the people not to take medicine, and not to be afraid of cold air or cold water." To the observance of these rules and to the fact that he never on any account left home Mr. Penrose attributed the good health he enjoyed to within four days of his decease. He invariably kept the windows of his bed-room open both in summer and winter all the year round. Frequently his bed was covered with snow in the morning, yet he never took cold or suffered any inconvenience. He had a perfect horror of medicine, and would not allow a bottle of physic of any description to be brought into the house. He performed his toilet at the pump in a back-yard, to which he walked barefooted summer and winter. With the mercury below zero he would stand at the pump and souse himself from head to foot with cold water by its agency, without paying any attention to the inclemency of the weather. He never wore an overcoat, dressing alike at all seasons, and never drank anything but cold water. Altogether he led a most enjoyable life ; and, his simple tastes being indulged at small cost, he amassed considerable wealth, which will now be divided amongst his nephews. He was a great smoker, and was seldom seen without a pipe in his mouth.

THE real colloquial acquisition of any foreign tongue is stated by Dr. Walshe, in a recent work on the linguistic faculty, to be extremely rare. He thinks it next to impossible for a man to learn his own and even one other language so as to speak both of them with a proper intonation, inflection, vocal ring, pronunciation, accent, and fluency, so well as to be able to translate from either language into the other with correct phraseology, word collocation, and idiom an epigrammatic article on the topics of the day and a serious disquisition on a problem of art or literature. Apart from the mental

qualifications which must be united in one individual to enable him to readily master a foreign tongue, there are many of a physical character which evidently can be but very rarely overcome.

IF walking alone is adopted as the means to counteract the effect of too much sitting, then care should be taken that system enters into the walk. A slow, desultory sort of walk is of no earthly use; it simply tires one without any beneficial result. The walking should be brisk, with the head up and the chest thrown forward. The breathing should be regular and as free as the swing of the limbs. The distance is optional, of course, but two miles ought to be no task for the man who wants to improve his health. The distance can be increased as the pedestrian begins to feel the benefit of the walking.

Answers to Correspondents.

[Persons sending photographs for remarks on their character under this heading must observe the following conditions :—Each photograph must be accompanied by a stamped and directed envelope, for the return of the photographs; the photograph, or photographs (for, where possible, two should be sent, one giving a front, the other a side view), must be good and recent; and, lastly, each application must be accompanied by a remittance (in stamps) of 3s. 6d., for six months' subscription to the MAGAZINE.—ED. P. M.]

G. M. (Sawston).—You have a mind that, if properly directed and cultivated, would enable you to exert an influence superior to that of ordinary men equally educated; for your brain is high, and rather broad on the top, which would aid to sustain you in an elevated position, and enable you to command respect. You are not characterised particularly for force, but you have considerable firmness and general stability of character. You have good perceptive powers and practical talent, and the qualities that give common sense. You are not copious in talking, but should cultivate your talking talent and improve yourself as much as possible in that direction. The tendency of your mind is to science, or to a profession where the moral faculties are required. In business you are qualified to deal with the qualities of things, and their applications. You would succeed about equally well working in iron as in wood, or in general agency; but if employed in connection with iron work you would be equal to your task, excepting that you are not very fond of hard, physical labour or heavy tasks.

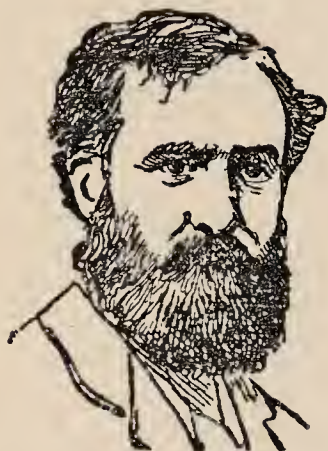
J. L. (South Kensington).—The likeness indicates good perceptive intellect and practical talent; good judgment of things, and an eye to business. The lady has favourable powers for order and arrangement; can carry much business in her mind. She is not wanting in energy and force of character, but is somewhat wanting in sympathy and tenderness of feeling where her affections are not called out; hence toward strangers, and those where she has prejudice, she would be likely to express herself too strongly. She is

very firm, determined, persevering, and rather unchanging in her will. She is more secretive and reticent than cautious and circumspect; is more proud than vain, and has much more strength and individuality of character than pliability, blandness, affability, or ambition to be fashionable; still is very anxious to have personal influence and to sway others. She may be a good mother and an affectionate wife, but would look after her own affairs and family rather than give aid to missionary operations.

P. M. R.—You possess a very ambitious spirit; will not be content unless you are creating a sensation somewhere. You have a high degree of the nervous temperament, consequently are very active, restless, and uneasy. You possess a favourable organization for some practical sphere of life; are fond of science and all kinds of experiments; are delighted with facts; are definite in your conversation, and distinct in your desires. If you joke you are rather personal, and to the point. You have great will-power and determination. You may prefer public life and position. You are not so cruel, cunning, crafty, or selfish, as you are proud, ambitious, persevering, and tenacious. You would make a good chemist, surgeon, literary man, or traveller.

G. W. B.—You have an active organization; are one of the busy, industrious kind; are full of contrivances, and readily devise ways and means. You can turn off business with dispatch; can sell goods better than purchase; have more power to plan and lay out work than to remember details and past transactions; can remember a speech better than common conversation; are fond of argument, and quite original; have considerable taste and imagination; are naturally polite and ambitious to please, and are comparatively mild in your disposition. You are as favourably adapted to business as to anything.

MR. M. M. has an organization favourable to mental and physical action. He has none too much vitality to support the wear and tear of his nervous system. He has great earnestness and sincerity of mind; is a close observer; has extra powers of arrangement; can do a systematic business; is quick of understanding; is wide-awake to all conditions of things around him; is exceedingly cautious and watchful, if not suspicious, of that which he is not well acquainted with. He can adapt himself to a great variety of circumstances. He is pliable in his disposition, and is prepared to do whatever seems to be best, although he never did it before. He easily becomes interested in other people. He is mirthful in his disposition; rather bland in his manner; quite intuitive in his perceptions of character and truth. He has a good ear for music and for sounds, and knows people by their voices as much as by their looks. He is capable of a high degree of culture, and, if not in too great a hurry, can work himself up to a stable character and to extensive influence; he is liable, however, to be in too great a hurry, and to want to get along too fast. He has a public spirit, and is very anxious to come in contact with public life and labour.



LORD HALSBURY.

SIR MICHAEL HICKS-BEACH. . W. H. SMITH, ESQ.

LORD IDDESLEIGH.

LORD CARNARVON.

LORD GEORGE HAMILTON.

COLONEL STANLEY.

MR. E. STANHOPE.

THE Phrenological Magazine.

OCTOBER, 1885.

THE NEW CABINET.

LORD CHANCELLOR HALSBURY.



HE temperament of this gentleman indicates a vital and mental predominance ; hence he is both active and excitable. His brain is developed favourably in the superior part. He should be characterised for originality of mind, having power of thought and ability to comprehend principles, and not short of perceptive power ; yet his head indicates a philosophical rather than scientific turn of mind, and he should have been much given to scholastic pursuits as a young man. He had the ability to learn foreign languages, to be good in grammar. He requires preparation before speaking, but prepared to present his ideas in a clear, lucid manner. He has ample scope of mind, takes large and broad views of things, and is kindly disposed. He is sympathetic and humane in his disposition ; he has a distinct regard for justice and obligation ; he is firm in the discharge of his duties. The specialty of his mind is the elevated tone, the general moral tendency, and his gift at reasoning and having an abundance of ideas of his own. He has the capacity for a hard worker when necessary, but would prefer study, reading, and writing, rather than labour.

SIR MICHAEL HICKS-BEACH.

Chancellor of the Exchequer.

This gentleman has a strong, vigorous organization, with more than ordinary strength of constitution. He is thoroughly masculine and like his father's ancestry, and works and talks vigorously ; is well able to grasp a large or complicated subject and master it. His cast of intellect is philosophical rather than scientific, and he is more forcible than copious in his style of speaking. He is versatile in talent, and not easily thwarted in his plans ; he is original in

his mode of thinking, and has strong opinions of his own; he is courageous, executive, and forcible in times of great danger, yet his cautiousness and thoughtfulness are too influential to allow him to be reckless. He has a strong will, and can hold steadily to his purposes; is strong in his likes and dislikes, and takes a positive position. He is a strong partisan and no half-way man in anything. He has a full share of wit and humour, and can be quite sarcastic in argument; he will retain his youthfulness into old age, and in company is pliable and bland. His brain as a whole is well balanced; it is high and broad in the coronal portion, indicating strength of character; he is organized and naturally qualified for a responsible position, and he will appear to the best advantage in times of the greatest trial and responsibility.

THE RIGHT HON. W. H. SMITH.

Secretary of War.

This gentleman has a large brain, a comprehensive mind, and is able to conduct business on a large scale. He should be remarkable for his general, social, domestic, fatherly disposition; for his sympathy, kindness, and interest in the welfare of others; for his feelings of reverence and respect for the superior and sacred. He is not proud, haughty, vain, fashionable, or fond of display and show, but mixes among men as one business man would with another without any ostentation. But the more remarkable features of his character are connected with his intellect. He has great power of observation, uncommon ability to attend to details, can carry a vast amount of business in his mind, can arrange and systematise with great definiteness, is very accurate in figuring up and making estimates. He has a perfect memory of place, and is capable of suiting himself to all the changes that circumstances might present. His power of analysis is good; he quickly draws correct inferences and sees the fitness of things. He could succeed in any scientific or practical sphere of life. He is less tempted, less liable to be warped by any excesses of his own nature than most men; few have so available an intellect and so well rounded out and fully developed moral organisation as he has, hence is worthy of trust in almost any position in which he may be placed.

LORD IDDESLEIGH.

First Lord of the Treasury.

This gentleman is fairly balanced in body and brain, is a close observer of men and things; quick to see the condition of things around him, he acquires positive knowledge; is

definite in his ideas, talks about what he sees and knows. He has favourable powers for criticism and discrimination. He is more characterised for general frankness and candour than for reticence. He is not reserved, not specially characterised for force and executive power; he would prefer professional life rather than physical labour. He has a strong love nature; he is gallant and interested in female society. He has a favourable degree of ambition, pride, and regard for position. His moral brain appears to be favourably developed, but would show to a better advantage if there was more force in the base of the brain to give distinctness to his character. He will do the best where it requires the closest observation, powers of discrimination and ability to adjust matters where one thing will be adapted to another.

EARL OF CARNARVON.

Lord Lieutenant of Ireland.

This gentleman has a predominance of the mental temperament, is naturally given to study, read, write, and devote himself to intellectual pursuits; with considerable effort he could become a worldly business man, but that is not his forte. He has not a strong hold on life, is not particularly in sympathy with physical existence, and does not care much about mixing up with every-day people. He is rather exclusive, very steady and uniform in his general character, is always the gentleman, and has no sympathy with the coarse and vulgar. He is not characterised for warm, genial, jolly, social spirit, but minds his own business, goes steadily along and carries out his purposes. His moral brain is favourably developed; Veneration appears large, which favours religious worship, aristocracy, and conservative feeling. He is correct in his mind and manners, and discriminating in his mode of reasoning. He is intuitive in his perceptions of truth, is very apt to make points in his remarks, and expresses himself definitely. The tone of his mind is elevated, and he exerts but one kind of influence. More executive power, more arterial blood, and more of the social disposition to commune with others might render him more popular.

LORD GEORGE HAMILTON

First Lord of the Admiralty.

Has a fine quality of organization, and is capable of high culture and an elevated tone of mind. He has a favourable balance of power, and there is harmony between his face and head. His head is particularly high in the crown and above

the ears, indicating a great amount of manliness, pride, independence, positiveness of character, with a capacity and disposition to take the lead and be the master spirit. He has more than average individuality of character, and his presence will be felt wherever he may be. He will stand by his opinions and keep up his dignity and command respect in any company. He has more than average tastes, sense of beauty and perfection; he wants everything in style and as near perfect as possible, and will patronize the best artists if any. He must have derived the tone of his mind from his mother. He is fond of music, art, and oratory, and has favourable qualities for a speaker. He has not so much force and executive power as dignity and stability of character; he has more of the feeling of contempt and scorn than of those of revenge and malice. He has a hopeful, buoyant, elastic spirit and a speculative turn of mind; his influence over his friends is genial and pliable. He has good scholastic ability, joined to literary and planning talents, and all are superior to his perceptive, scientific abilities. He has more of the feeling of justice and equity than of reverence and respect. He is naturally qualified for a leader, speaker, author, or artist.

COLONEL STANLEY

Secretary for the Colonies.

Has a highly vital organization. His sympathy is with the things of this life—with the material rather than the spiritual. He cannot live on short allowances, but needs a good dinner before he fights. He enjoys life and delights to come in contest with life and action. He may not be fond of hard work himself, but he takes an interest in that which requires power and strength. He is capable of a high degree of resolution and enthusiasm. He has a marked degree of ambition and desire to be prominent, and he will make the most out of his public position to gain popularity; is mindful of appearance, and anxious to be popular and favourably known. He has only fear and forethought enough to be prudent in action, but not enough to give undue restraint. In all responsible matters he is firm and positive, yet can be pliable, and in company politeness and urbanity would be distinctly manifested. While he has a good opinion of himself he is not unmindful of the presence of others, nor wanting in reverence and respect. He is kind and tender-hearted, especially to the aged, to children and their mothers. He enjoys a good story or joke as well as a table well loaded and surrounded. He loves excitement, is a magnetic

speaker, has a practical, available intellect, and has the qualities to do about the right thing in the right time. There is danger in his being too excitable and impulsive, yet generally is level-headed.

MR. E. STANHOPE.

President of the Board of Trade.

This gentleman has a high degree of the mental temperament, and his strength of character is connected with his brain and nervous system ; such men have their hands full of work. He has more industry and force of character than he has strength of constitution. He is no half-way man in anything, but is thorough and executive, and cannot put up with inefficiency and procrastination. He is liable to be too forcible and venturesome rather than timid and hesitating. He is more reticent and politic than cautious and anxious. He is self-reliant and satisfied with his own view of a subject, and has no disposition to cater to others or ask advice. When he has once decided and settled his mind on a subject he holds to his opinion to the last. Few men are more tenacious and unchangeable in their opinions and purposes than he is. He is no trifler nor imitator of others, but keeps up his dignity under all circumstances. His head indicates a strong desire to mind his own business and not to meddle with the business of others. He has taste and sense of refinement, and he appreciates wit when it is not vulgar ; he has more talent as a business manager and a financier than as a speaker. He is governed more by reason than by observation, and is more sound and logical than knowing, communicative, or showy. In money matters he is careful not to have the out-goes greater than the incomes. He is liberal when it will pay to be so, but however much money he may have he will never have enough to squander or waste. He does everything on the fair and square plan, and never "lumps" a bargain or guesses at the amount. Firmness, tenacity of opinion, self-respect, integrity, energy, economy, and power to plan and organize, constitute his predominating powers of mind.

WE could never have felt the joy, never have had even the idea of love, if sacrifice had been impossible to us. In our truest and intensest happiness, that which is otherwise felt as pain is present. Pain, we may say, is *latent* in our highest state. It lies hidden and unfelt in the form of devoted sacrifice ; but it is there, and it would make itself felt as pain if the love which finds joy in bearing it were absent.—JAMES HINTON.

PHRENOLOGY FOR CHILDREN.—II.

(a) The selfish sentiments. What faculties do they comprise?

(a) The selfish sentiments form a group of four faculties—Cautiousness, Approbativeness, Self-esteem, and Firmness—and are separated from our large group of selfish propensities because they hold a higher position and are more elevated in the way they show themselves in our characters.

CAUTIOUSNESS.

(a) Definition.—(b) Location.—(c) What is the natural language of this faculty?—(d) Do we notice any difference between boys and girls in regard to this organ?—(e) What examples illustrate this faculty when large and small in children?—(f) How does a deficiency of this faculty show itself?—(g) Do mothers generally show a large degree of Cautiousness? and what is the result when too large in children?—(h) What animal shows a want of Cautiousness, and what kind shows a large amount of it?

(a) The definition of this faculty is very plain, for the word itself is its own interpreter, and I expect each of my young friends could give me a pretty clear idea of the true definition; and I am not wrong in my surmise, for Richard says it means Guardedness; Mary, Carefulness; Bella, Fear; Jo, Restraint; little Alice, Timidity; thoughtful Jane, Prudence; Jack, Watchfulness; Lucy, Solitude; Fred, A sense of danger; James, A regard for the future. Quite right; I could not have given better definitions myself.

(b) Now, the location of this faculty is just above Secretiveness, on both sides of the head.

(c) You know when you see a red light on a signal-box that it means danger; and wherever there is the block system, the red light or flag stops the train until the colour changes to green. Just so, children, is it with the working of your minds. Cautiousness gives the danger-signal, and Hope, among other faculties, changes the fear into bright anticipation. It is always on the look out for accidents, failures, possible disappointments, and changes. It is always looking ahead into the future, and is generally prepared for whatever comes along, and is seldom taken by surprise, or off guard.

(d) We notice a great difference among you boys and girls with regard to this faculty. As a rule it is larger in our girls than our boys.

(e) Robert has very little sense of danger, and is constantly doing rash things. He says he is longing to ascend all the highest mountains of Europe alone. He does not study the dangers that experienced travellers have found, even with a guide; he feels confident he could make his way alone. His

brother Jack, who has a full development of Cautiousness, has many times warned him against the dangers of mountain-climbing; but even the possibility of dense mists, cold, hunger, snow, or slipperiness, is not enough to dampen his ardour. Mary, on the other hand, never does anything without careful deliberation, and always carefully estimates her chances for success or failure. Little Alice is timid about lending her dolls, for fear of their getting their heads cracked, their arms pulled off, or their legs broken. So she replies: "I would rather nurse my dollies myself, if you do not mind very much, Bella." So Alice is thought to be very selfish not to lend her dolls to her playmates; but in reality she is more frightened to trust them out of her sight than greedy to keep them all herself. She knows that Bella's dolls have all some disfigurement, for they are thrown about in a careless way, and Bella has more than once said, her mother was going to buy her a new doll at Christmas, and she was going to do just as she liked with her old ones. She has small Cautiousness, and very little love or attachment for her dolls and playthings.

(*f*) It is distressing to meet a child who has a deficiency of this faculty; it requires careful training. Such an one rushes into a new enterprise when he grows older—especially if Hope is large—with the most sanguine anticipations, without seeing the results. He does not know what fear is, and chafes under any restraint, and thinks the advice of his friends unnecessarily given. In all sports he is the most daring, but not the most successful. He runs great risks with his life—in the water and out of it. By riding on the edges of precipices; by riding the fastest horses; by swimming in deep and uncertain currents; and would like to imitate Captain Webb, who attempted to swim in the boiling and turbulent Rapids at Niagra. Boys and girls who have small Cautiousness and small Secretiveness often offend their friends when they really do not intend to, by the way they express their likes and dislikes.

(*g*) Mothers generally show a great share of Cautiousness by being apprehensive lest their children will come to some harm when away from them, and give themselves unnecessary trouble and anxiety. When too large in children they show it by being morbidly sensitive about beginning anything new; they are irresolute, restrained, especially in company; they procrastinate and put off until too late.

(*h*) The fly shows a want of it when caught in the spider's snares; but the hen exhibits a large quantity when her chickens are let out of their hen-coop. While the excess of

this faculty leads to unnecessary fear, carefulness, and anxiety, a deficiency makes a child reckless and indiscreet.

APPROBATIVENESS.

(a) Definition.—(b) Location.—(c) What is the language of this faculty?—(d) Ought this faculty to be encouraged in children?—(e) How do some nations cultivate this faculty in their children?—(f) How do our little girls often show it?—(g) What do boys see in their fathers to imitate and to fire their ambition—such as warriors, statesmen, &c.?—(h) What does the excess lead to?—(i) What makes children excessively sensitive?—(j) How can this faculty be regulated?

(a) The definition of this faculty is politeness; a sense of character; a desire to excel; a love of praise; a sense of honour.

(b) Its location is just between Cautiousness and Self-esteem.

(c) The language of this faculty gives the disposition to a boy to be polite, gentlemanly, and courteous. It helps the girl to adapt herself in a pleasant way to others; it makes her want to appear well before her mates; and, in fact, she wants everything as nice as her friends. It makes the boy sensitive when told of a fault before his school-fellows. Ellen was delighted when she received those words of praise from her teacher. She felt very much encouraged; enough so to begin again with a light heart to learn her next difficult lesson.

(d) This faculty ought to be cultivated in children when it is indifferently developed; for, when it is very small, they care but little about their appearance, whether their faces and hands are washed before going to school or not. They have no stirring ambition to set them to work, and fail in little attentions to father and mother.

(e) Different nations show this faculty in their own peculiar way. Some take pride in ornamenting their children's skins with numerous figures and designs; others take pride in binding up the feet of their little ones that they may be thought well of when they go into society. Some tighten the supple bones of their daughters by putting them into stiff stays that they may have fashionably correct waists when they are older. Some flatten the foreheads of their children as a mark of beauty.

(f) Little girls show this faculty by their love of dress. Nellie makes any excuse to get her mother's permission to put on her blue cashmere. Katie is very fond of rings, and all kinds of jewellery, and always fancies she can be a better girl when she has on her gold ring and bracelet; so she often takes them with her to school and slips them on, and

no one can complain of little Katie not learning her lessons when she has on her favourite sentinels, as she calls them.

(*g*) Boys study their father's noble and heroic deeds, and long for the time to come when they too can go out into the world and conquer their enemies, make a great name for themselves, and add one page to history. Boys, study up your histories, and your books of biography, and pick out the characters who showed the most ambition—such as Napoleon, and many of the ancient kings. Study also the lives of living men, and you will understand more fully what this faculty leads a person to do.

(*h*) The excess of this faculty makes boys very restless; over-anxious to outdo every other boy in the games, in sports, in exercises, whether they are equal to the task or not; hence many strain themselves while young, not from the hard work that boys used to do, but from an over-stimulated ambition.

(*i*) This faculty, when very large, also makes children very sensitive and susceptible; often so much so that they cannot go out into company with any pleasure for fear somebody will criticise what they say or do and wound their feelings. Such children should be allowed to come into the drawing-room at home, when there is company, and play on the piano and recite, before they are put to the misery of visiting in other houses.

(*j*) This faculty can be regulated if children are only taught to help themselves in their own government, and not governed with the slipper or rod entirely. Children who only obey through fear never learn to govern their tempers, their ambitions, or their passions. Mothers should endeavour to secure and keep the confidences of their children for years after the daily governess has been dismissed, so as to prevent the sensitiveness of their natures being brought out too much.

SELF-ESTEEM.

(*a*) Definition.—(*b*) Location.—(*c*) Natural language of this faculty.—(*d*) How necessary is this faculty?—(*e*) How can you pick out a boy, among boys, who has large Self-esteem?—(*f*) Is it apt to be perverted?—(*g*) How do the two faculties, Self-esteem and Approbativeness, differ?—(*h*) What animals show this faculty?

(*a*) The definition of this faculty is self-respect, self-love, dignity, independence, love of liberty desire to take the lead, command others, and hold responsibilities.

(*b*) Location: in the crown of the head, just where the back of the head rises, between Firmness and Continuity—on each side of it, remember—lies Approbativeness.

(c) Children show this faculty most distinctly. Sometimes by thinking they can decide for themselves just as well and as wisely as their parents. Boys show it by their anxiety to get away from the restraints of home. They chafe under discipline, and think that to do as they please is an indication of their importance.

(d) It is a very necessary and helpful faculty. It assists both boys and girls to have confidence in their own powers, and to have self-respect, and it enables them to rely upon their own exertions.

(e) You can always pick out the boys who have large Self-esteem, even in a group. Such lads will always take the lead, instinctively, give directions, and rule the crowd. There is nothing they like better than to see others follow their leadership, and to express their opinions before an audience, however small.

(f) This faculty is easily perverted, and if not curbed in childhood inclines a person to be haughty, proud, dictatorial, authoritative, imperious, and domineering. Boys, I want you to be self-reliant without being what we have just indicated is the case with those who have little control over their pride. I want you to have self-respect—for that calls out respect in others—without indicating that your opinion is the only one worth listening to. On the other hand, you children who have the organ small must cultivate it by mixing with those who will call it out. You must guard against being too familiar and easy; too much influenced by the good or evil report of others, and must not shirk responsibilities, and shift them upon another's shoulders, and must cultivate more dignity, and not fear that you will not succeed in your undertakings.

(g) The difference between Self-esteem and Approbation is, that the latter, when large, inclines one to be too anxious to please, and too vain of a good appearance; while Self-esteem thinks more purely of self-respect, and cares less for the approbation of others.

(h) The peacock is a good illustration of how both faculties can be shown.

FIRMNESS.

(a) Definition.—(b) Location.—(c) How does the importance of this faculty show itself?—(d) What does the perversion of this faculty lead to?—(e) Who have shown this faculty large?—(f) What animals indicate that they have this faculty large?—(g) Why are some people easily persuaded?—(h) Do great undertakings require more than ordinary perseverance and firmness of purpose?

(a) The definition of Firmness is usually will-power; ability

to decide and keep to a certain decision; perseverance; fixedness of purpose; tenacity to hold to an idea; obstinacy if allowed too much control.

(*b*) Location: in front of Self-esteem, and behind Veneration, on the top part of the top head.

(*c*) The importance of this faculty shows itself in the tempers of children, and is a faculty which requires great control and careful management by parents and teachers. Children should be taught how necessary this faculty is, yet how difficult to discipline without their help.

(*d*) When perverted this faculty leads to the greatest trouble to the person, and all around or connected with him. Boys and girls who are stubborn, obstinate, perverse in their ways, are unenviable little creatures. There is, however, a difference between being firm and being obstinate. Everyone should know the difference.

(*e*) Look again in your histories of the lives of great men, and you will find such characters as Washington, Bruce, Columbus, Beaconsfield, Livingstone, had large Firmness, which showed itself in indomitable resolution. Though other faculties encourage and work with this faculty, still it is the keynote to perseverance and decision of mind.

(*f*) You have probably noticed what animals have shown this faculty. The spider is a remarkable example; for facts read the life of Robert Bruce and the incident with the spider.

(*g*) Some children are easily influenced, even against their reason and better feelings, through not properly exercising this faculty. Some are always wavering and undecided in what they do. Many boys are as uncertain and unstable in their actions as the will-o'-the-wisp. Such are generally the dupes of everybody, and made to do just as the stronger will desires.

(*h*) All great undertakings require a large amount of this quality in order to surmount difficulties, overcome encroachments, and start fresh enterprises.

You will now have seen, by these simple explanations of our various faculties, that the selfish propensities and sentiments have been given to us for some practical good; that every organ is needed to yield its share in making our characters complete. You will also see that we are obliged to have a daily fight with our strong and weak powers in order to keep them in anything like a harmonious condition. We need, therefore, to study ourselves, so that we may criticise our own conduct, so that before anyone points out a defect we may have already corrected it. One great advantage that young people gain in studying phrenology is the knowledge

of how one faculty helps another, and how beautifully they blend when naturally developed. We shall next come to the moral and religious group, and shall then find out why some children are more interested in religious subjects, more obedient, or more disrespectful than others.

THE CORRELATION OF PSYCHOLOGY AND PHYSIOLOGY.

BY DANIEL NOBLE, M.D.

CHAPTER I.

GENERAL REMARKS ON THE PHYSIOLOGY OF THE BRAIN AND NERVOUS SYSTEM. THE REFLEX FUNCTION. OFFICE OF THE GREAT SYMPATHETIC. SENSATION AND THE RESPONDENT MOVEMENTS. PHYSICAL APPETITES.

FROM the remotest periods of physiological speculation, the brain and nervous system have been supposed to have some special connection with the manifestations of conscious life. So early as the Greek civilisation, there were philosophers maintaining even the distinction between the nerves of movement and those of feeling. But although such doctrines were obscurely taught by the ancients, it has only been in modern times that they have received systematic development and a scientific form. Unzer, who wrote in the latter half of the last century, refers to the transmission of external impressions as sensations to the mind, and to the spontaneous conceptions which result in voluntary motion, and asks: "How could it be possible to explain these two classes of phenomena if the existence of difference in the fibrils of the same nerve be not admitted?"* Sir Charles Bell, by his experiments, gave to this notion that precision and certainty which demonstration alone can furnish.

And so with regard to the encephalon. Long before the time of Gall, speculative physiologists suggested the probability of its distinct parts subserving particular mental operations. Only a few years prior to the publication of Gall's views it was observed by Prochaska: "Since the brain, as well as the cerebellum, is composed of many parts, variously figured, it is probable that nature, which never works in vain, has destined those parts to various uses; so that the various faculties of the mind seem to require different portions of the cerebrum and the cerebellum for their production."† It was Gall, however, who gave vividness to this idea, and a certain

* Dr. Laycock's Translation for the Sydenham Society.

† Dr. Laycock's Translation.

scientific shape. His physiology of the brain, in correlation with analytical psychology, has received a much larger share of attention and consideration than any which preceded it. Phrenology, however, as a system, has not received that confirmation from later investigations which, at one time, was anticipated by many physiologists.

Of late years the labours of Dr. Marshall Hall, Dr. Carpenter, the late lamented Mr. Newport, Mr. Solly, and some others in this country, and those of Müller, Valentin, and Stilling particularly, on the continent, have done much to advance the physiology of the brain and nerves; more especially in giving to it a greater exactness and a more demonstrable character. They have perfected it, indeed, to a degree which, a quarter of a century ago, would scarcely have been considered possible.

I will now proceed to furnish a summary of what may be deemed the existing state of our knowledge upon this subject, taking it for granted that my hearers have already a sufficiently accurate acquaintance with the descriptive anatomy of the structures in question.

You are aware that, whilst the substance of the brain and nerves in appearance and general character has everywhere a certain similarity, there is yet an obvious divisibility of it into two distinct kinds—the grey and the white matter; a divisibility which applies alike to the encephalon, the spinal cord, and the nerves. The difference in these nervous substances is not an affair of colour only; it applies also to their intimate structure and organization: the white matter is made up of bundles of tubular fibres, whilst the grey is composed of aggregated cells, and is often denominated the *vesicular neurine*. To collections of this vesicular substance, the term *ganglion* is very generally applied, because the knots of nervous matter which formerly were supposed to give origin to the nerves, and which are distributed so largely throughout the body, are vesicular in their composition. And thus the identity in structural constitution has led to employment of the word ganglion as a common term. But the ganglionic or spheroidal form is not at all essential, as was at one time supposed, to the constitution of what is now called ganglionic substance.

Physiological and pathological researches have rendered it more than probable that the vesicular and the fibrous substances have, universally, separate and distinct offices in the animal economy. Gall, noticing the extraordinary vascularity of the grey tissue, taught that it was the first formed, and that it constituted at once the producer and the *matrix*,

as he called it, of the white substance ; a fact which he enunciated as general in regard both to the brain and nerves. This theory, however, retains no hold upon physiologists of the present day, who simply maintain that the ganglionic structures are the source of *functional change*, and that the fibrous matter is for the *conduction* of impressions originating in the former. In the promulgation of this theory, Mr. Solly shares probably in the most eminent degree.*

In studying the vital characteristics of man and animals, aided by the lights of anatomy and physiology, we judge of their sensibility and psychical endowment by watching the phenomena which exhibit themselves in movement and other expressions of activity and consciousness ; and, in deducing conclusions concerning the springs and the quality of particular actions and conduct, we look very properly to the analogies gained in the introspection of ourselves. Thus premising, I will pursue the several processes which take place through the instrumentality of the brain and nervous system, discussing, in the present lecture, the simpler manifestations of nervous function, and, in the two succeeding ones, proceeding with the more elevated displays of psychical capability.

Although not actually demonstrated, it is yet a very rational hypothesis, based upon the clearest analogy, that, distributed largely and very minutely along the whole cutaneous and mucous surfaces, there is vesicular neurine, forming the peripheral expansion of nervous filaments, which may be likened to the structure of the retina as it expands itself behind the vitreous humour. When an irritant impression is made upon the surfaces thus supposed to be supplied, a respondent movement ensues, unless the controlling and restraining influence of the will, or some other qualifying circumstance, prevent it ; and this movement does not necessarily involve any consciousness whatever. The impression wrought upon the superficial nervous substance is conveyed by fibrous filaments to the vesicular neurine within the spinal cord, in which a vital change occurs—an influence which expands itself in an outward direction, and, through other filaments, induces muscular contraction.

It is a received doctrine that the grey matter, continuous throughout the whole length of the spinal cord, forms the analogue of the ventral ganglia, separate in the *articulata*. If one of these latter, the centipede for example, be divided into several parts, each segment will move upon the applica-

* See his work on the Brain.

tion of an outward stimulus. Amongst vertebrated creatures, in which a coalescence of ganglia in the spine has place, frogs exhibit such movements very strikingly. If the skin below the head be irritated, after detachment of the encephalon from the spinal cord, motion, the same in its outward character as that which ordinarily follows upon sensation, will ensue. The unconscious nature of this phenomenon becomes still more obvious when that portion of the cord which is immediately above the origin of the crural nerves is divided; irritate the hind legs under such circumstances, and they are seen to retract in the most lively manner. Corresponding phenomena may be observed in the higher classes of animals after decapitation. Even in man, certain pathological states, which involve some breach of continuity between the brain and spinal cord, will show the same thing—involuntary movement respondent to an impression of which there is no sensational consciousness.

Movements taking place under the circumstances described have been denominated *reflex*, *excito-motory*, and *automatic*. None of these expressions constitute very exact definitions; provided, however, the function designated be rightly appreciated, the particular term employed is not of so much consequence.

The purpose of the spinal axis and its reflex function would appear to be the conservation of the organism, through excitation of the respiratory acts, by its governance of the various orifices of ingress and egress, and by its contribution to the integrity of some other processes in which reflex movements participate.

I must here make a few remarks upon the ganglia of the so-called sympathetic system of nerves. These ganglia are scattered largely throughout the body; in front of the vertebral column they form two distinct and regular chains, the whole being connected by nervous filaments extended in all directions, and especially accompanying the blood-vessels. The precise function of this portion of the nervous system is somewhat obscure. Consciousness can hardly be supposed to have place in its exercise. It most likely communicates a susceptibility to certain motions involved in the processes of circulation, nutrition, and secretion; an influence not needed for their simple accomplishment, but required in the animal economy, in order that they may become related with, and in a measure subordinated to, the higher operations of the brain and nervous system.

That the functions purely organic are, in some way or another, under the influence of the nervous system, in man

and the higher classes of animals, is undoubted ; and that this influence operates immediately through the sympathetic system, is inferred from the following amongst other circumstances.

The anatomical distribution of this system affords to such an estimate of its functions, antecedent probability ; but numerous facts exist which give to this view a much higher character than that of mere hypothesis. Dr. Axmann, of Berlin, some years ago instituted experiments upon frogs, with the intention of elucidating this department of physiology. Upon dividing the crural nerves, at their origin between the spinal cord and spinal ganglion, he found that paralysis of motion and sensation ensued without sensible prejudice to the purely organic processes. On the division, however, being made between the ganglion and the communicating branch of the sympathetic, there resulted, in addition, pallor of the skin, partial desquamation of the epidermis, softening and friability of the tissues, minute extravasations of blood, and œdema. Upon these experiments Romberg has the subjoined remarks. "If the sciatic nerve is divided below the part at which the fibres of the communicating branch, or, in other words, sympathetic elements, are introduced into it, we find disturbances in the circulation, which are distinctly manifested in the web of the foot. The circulation is rendered indolent and irregular ; the dilated vessels are overcharged with blood-corpuscles, and in a few vessels the blood is arrested."*

It is known that certain drugs act upon particular divisions of the nervous system by a sort of elective affinity. And it is observed that some poisonous substances exert their primary influence upon the respiratory movements, which are mainly under the control of the excito-motory system ; and again, that others, in the first instance, arrest the heart's action, presumably from injury done to the sympathetic. "Poisoning with tobacco and arsenic," says Romberg, "paralyses the cardiac nerves and arrests the circulation, while the respiratory movements continue On the other hand, the West Indian arrow poison paralyses the respiratory and voluntary movements at the same time that the action of the heart continues and may be kept up by artificial respiration."†

Disorder of the organic functions sometimes takes place in but one of the symmetrical halves of the body, as if from

* "Nervous Diseases of Man." Dr. Sieveking's Translation for the Sydenham Society.

† Op. citat.

some corresponding perversion of nervous agency. Sir Henry Holland has related cases in which copious perspiration was limited in this way.*

Altogether, the evidence favouring the theory which assigns to the sympathetic nervous system a controlling influence over the processes of circulation, nutrition, and secretion, is, from its cumulative character, exceedingly strong, although it may not amount to actual demonstration.

The primary and more simple forms of *consciousness* arise through the instrumentality of the nerves and ganglia of the senses, which constitute the media through which impressions are obtained of the qualities of external objects. Although, under some circumstances, the senses may be excited from internal conditions, sensation ordinarily and naturally develops, in the percipient, a consciousness of *outness* in the excitant. The five *external* senses, as in consequence they are called, reveal the physical qualities of objects, their odour, savour, sound, colour, and density. And the functions of smell, taste, hearing, sight, and touch, are exercised, respectively, through organization very similar to that of the functions already described. Vesicular neurine—presumptively, when not demonstrable—exists at the peripheral extremity, in a state of expansion; and again at the central termination of the nervous fibres, as ganglion.

Vesicular neurine distributed upon the lining membrane of the nostrils possesses a specific sensibility to odorous matters; the impression which these make is conveyed by conducting fibrous filaments to the *bulbi olfactorii*, the ganglionic centres wherein the sense of *smell* is exercised.

The vesicular expansion of nervous filaments upon the lingual surface and the palate are specifically impressed by sapid particles; and the impression, being passed along fibrous filaments to the proper ganglionic centres, induces the consciousness of *taste*. There is some uncertainty concerning the nervous apparatus of this sense, in great measure owing to the mixture of filaments from different nervous trunks on the gustatory surfaces. The special character of taste as a sense, however, and the distinctness of its nervous filaments and central ganglia, can hardly be doubted. Twenty years ago, paralytic cases came beneath my own notice, and were published at the time in the *London Medical Gazette*, showing the abolition of tactile with persistence of gustatory sensibility, and *vice versâ*.

Vesicular neurine, spread largely within the internal ear,

* Chapters on Mental Physiology.

receives the vibratory undulations constituting the external cause of sound ; the fibrous filaments of the auditory nerve conduct the influence to certain grey nuclei in the posterior pyramids of the medulla oblongata, that form the ganglia of *hearing*.

The retina is largely composed of vesicular neurine ; visual impressions are carried along the course of the optic nerves, and attain the corpora quadrigemina, which there is every reason for concluding to be the ganglia of *sight*.

The four modes of consciousness just recounted, being accomplished by distinct nerves, and by organic apparatuses limited to particular regions of the body, have been denominated the *special senses*.

But there is developed a sense-consciousness not limited to any particular organ, but which refers itself more or less to the whole frame—common sensation. This sense resides principally in the skin ; it is particularly acute at the mucous orifices ; it exists, however, in the interior structures, but in a condition less intense. It is best illustrated by the simple notion of *resistance*. Its modifications comprise the several impressions essential to ideas of the hard, the soft, the rough, the smooth, the hot, the cold, the moist, the dry, and so on. It is, moreover, through this sensibility that we appreciate the state of the muscles—obtain the *muscular sense*.

This fifth sense also is, presumably, awakened through the vesicular extremities—the peripheral expansion of fibrous filaments. Whether the grey substance and white fibres originating and conducting common sensation be the same as those which subserve the spinal reflex function, is a question yet undecided. This much, however, may be admitted : the communicated impression ascends along the posterior columns of the spinal cord, and attains grey vesicular centres—the ganglia of common sensation.

Physiologists are not agreed as to the identity of these structures ; they must be expected, however, like the other sensory ganglia, to be somewhere at the base of the cranium ; and I am myself disposed to think that the vesicular nuclei within the lateral lobes of the cerebellum constitute the encephalic centres of common sensation. Many years ago, Foville assigned this function to the aggregate cerebellum ; and others, with great plausibility, have advocated the same notion. The anatomical connection which exists between the ganglionic structures in question and the posterior columns of the spinal cord, through the corpora restiformia, favours the idea which I have advanced ; and there are various physiological and pathological facts which go to corroborate it.

The experiments of Magendie and Longet show that the slightest touch of the fibres of the restiform bodies induces violent pain.* Hutin relates a case in which the sense of touch was so exalted that, upon the least contact, intolerable pain and restlessness ensued, with corresponding muscular contractions, resembling those produced by an electric discharge. The patient ultimately died in the most terrific convulsions, prostrate and exhausted. On examination after death, there was found, amongst other changes, atrophy of the cerebellum. "Its medullary centre, as compared with that of another subject, was a third less in size in either hemisphere. The white substance, which in the normal condition occupies the centre of the corpus rhomboidale, had ceased to exist; so that the fimbriated margins of this portion approached the centre, and only formed a small pyriform, very hard, greyish brown body."†

The view just advanced would seem to reconcile, in some degree, the doctrine of Gall with that of Flourens. The former, as all are aware, taught that the entire cerebellum forms the organ of the sexual instinct; and the latter (supported in his conclusion by most modern physiologists) conceives his experiments to have established that its office is to co-ordinate muscles acting in combination at the mandate of volition. It has also been thought to exercise some special influence in balancing the body. Now, if some portion of the cerebellum subserve ordinary feeling—common sensation, its connection with the function imputed to it by Gall is sufficiently intelligible without adoption of the phrenological doctrine. Numerous facts certainly appear to indicate some relation between the cerebellum and the organs of generation; but such facts receive an interpretation just as rational by reference to the tactile sensibility of these latter as by unqualified admission of the phrenological idea. In the view regarding the muscular office of the cerebellum, the facts bearing upon it may receive an explanation by considering the probable influence of its peripheral vesicular neurine—its cortical grey matter—in determining to the muscles some reaction respondent to their feeling. The experiments of Budge and Valentin demonstrate an apparent influence of the cerebellum, when irritated in its cortical portion, upon the testes and vasa deferentia, in occasioning their retraction.‡

If, indeed, the idea be ultimately confirmed, which assigns to the structure in question the co-ordination of muscles in

* Romberg. Op. citat.

† Op. citat.

‡ Op. citat.

voluntary movement, it perfectly comports with my own hypothesis concerning the ganglia of common sensation; for, as Dr. Carpenter remarks, "all voluntary movements require the *guidance of sensations*; and most of these are of the tactile kind."*

Let the whole case, however, be as it may, common sensation must have its proper ganglia somewhere; and it cannot be doubted that these, through the spinal cord, are in some sort of connection with every sentient structure.

I would beg my hearers to understand that, with respect to any hypothesis advanced in these lectures, the individual facts cited in its support are not offered as *proof*, but simply as exemplifying the *kind of evidence* which, by accumulation, might adequately substantiate the same.

All the sensory ganglia, it may here be noticed, besides their instrumentality in inducing the simpler modes of consciousness, produce reactions very often in the muscular system, when, through afferent nerves, they are stimulated from without; and that, too, in frequent independence of thought or volition. It would seem that impressions received in some particular ganglionic structure may be diffused through a whole chain of connected ganglia, and so bring about respondent movements of very varied character. These Dr. Carpenter designates *consensual*, not in the meaning of consentaneousness, but as occurring *with*, in dependence upon, *sense*. A young infant, long before distinct thought can have been awakened, exhibits restlessness from contiguity to its mother's bosom, provoked, it is probable, by the odour of the mammary fluid. An odious taste simply may determine the involuntary act of vomiting; a loud and unexpected sound will occasion slight but very general contraction of the muscles, as in startling; the eye, when dazzled, is rapidly withdrawn from the light; and a sudden dash of cold water provokes deep inspiration and audible sobbing. These muscular actions are *reflex* as to their modes of occurrence; but they differ from the reflex actions purely spinal in being essentially attended with consciousness; and they differ from ordinary movements in the circumstance that neither volition, nor ideas, nor mental emotion, properly speaking, are concerned in their production.

There are other sensibilities which are external in their related objects but which do not form the medium of information concerning the world without, and so, on this account, do not come within any of the foregoing categories. These

* British and Foreign Med. Rev., vol. xxii, p. 510.

comprise the physical appetites of *hunger* and *thirst*. Nothing is made out with respect to the ganglionic centres of these affections. Probably they somewhere exist among the tracts of grey matter at the base of the encephalon, there being much vesicular neurine there, the function of which is quite uncertain. But, upon this subject, conjecture on the basis of analogy alone exists at present.

FEMALE ASTRONOMERS.

THERE was a time, and that not many years ago, when woman was considered to be in every sense "the weaker sex," fitted by nature to be the companion of man in the humbler spheres of life, but not qualified by her intellectual endowments to accompany him in the higher fields of art, literature, and science. That notion, however, is fast losing ground, and the sooner it is quite exploded the better it will be for the world. That woman is capable of excelling in the departments of literature, painting, and music, we are having more and more evidence year by year; and the evidence will doubtless be still more conclusive the more we discard the old notion that, because a woman's sphere is largely in the house and home, she does not require so much education as man. In the following short biographies it will be shown (if proof were needed) that woman is capable of studying with success that most abstruse and difficult of the sciences—astronomy—and it will at the same time be seen that instead of her studies and learning standing in the way of the fulfilment of her duties as wife and mother, as is often asserted, they may even enable her to discharge them the better.

The first woman of whom we have any knowledge, who attained to eminence as an astronomer, was Hypatia, celebrated alike for her beauty, her learning, and her tragic fate. She was the daughter of Theon of Alexandria, and was born in the earlier part of the fourth century. From her earliest youth she exhibited extraordinary intelligence, in consequence of which her father resolved to give her genius a thoroughly philosophical culture. He was one of the most learned men of his time, and is known to the scientific world as the author of a work on Euclid. This book Hypatia studied with such success that she became celebrated as a teacher of mathematics and astronomy. She became a devoted student of the new science of Algebra, which was first treated of by Diophantus, and elucidated his propositions, mostly in verse. Bishop Synesius, the author of a

planisphere (probably the first actual star-chart made), who was aided in this work by her advice, called her "the excellent teacher." She computed astronomical tables after the pattern of those of Hipparchus, which she improved by fresh observations, as well as those of her father. On the death of the latter, Hypatia succeeded him in the chair of philosophy at Alexandria, and became the recognised head of the Neo-Platonic School of that city. She was successful, we are told, in raising up the sunken glory of Alexandria, and the fame of her learning was spread far and wide. Though not professedly a Christian, she was remarkable for the spotlessness of her life at a time of almost general corruption. Still, neither her talents nor her virtue saved her from the effects of fanaticism. Her college was regarded with jealousy, and her scientific teachings with suspicion and aversion. These feelings of rancour grew until a plot was contrived for her death. One day when she was returning home she was waylaid by an infuriated mob of ecclesiastics, led by one, Peter, a reader, and pulled from her chariot. She was then dragged to a church named Cæsarium, "Where," says an historian of the time, "they stripped her and murdered her with shells; and when they had torn her to pieces, piecemeal, they carried all her members to a place called Cinaron, and consumed them with fire." Damascius (author of the life of Isidore in Photius) says that Hypatia was the wife of this Isidore, and that Cyril, who was bishop of Alexandria at the time (A.D. 415), was the instigator of this dastardly deed of violence.

The next female astronomer of eminence we meet with was Maria von Lewen. She was the first of her sex to whom the world was indebted for a great work on astronomy. Her father was a physician of Schweidnitz, in Silesia. The exact year of her birth is not known; but it took place towards the end of the sixteenth, or about the beginning of the seventeenth, century, as she was married in the year 1629, in which year her father died. From her earliest youth she showed a decided predilection for the acquisition of knowledge. She studied languages as a pastime, and succeeded in acquiring seven, among which were Latin, Greek, and Hebrew. Her attention having been drawn to astronomy, she at once became enamoured of it, and gave herself to the study with extraordinary zeal. She was not satisfied with merely knowing and gazing at the stars, but made herself an adept in precise calculations. In the year 1650 she published (at Pitschen, in Lower Silesia) a work entitled, "*Urania Propitia, sive Tabulæ Astronomicæ.*" In this work she developed

a method of calculating the position of the planets, which she held to be more convenient than that of Kepler, and which was held in certain respects to be true—at that time at least. Kepler had made use of logarithms (shortly before discovered), and there is no doubt that Madame von Lewen's work was very welcome to many computors. She proved Kepler to have made some mistakes, as, for instance, with reference to the phases of Mars; but she took the great astronomer to task with singular moderation and judgment. She never spoke of him but in terms of the greatest respect, and warmly took up his cause against Lansberg, to whom Kepler's glory was as a thorn in the side. She showed that the tables of the latter were more in accordance with observation than those of Lansberg. Still, she recognised the latter's ability and his undoubted services to science without being bitter or unjust. In the introduction to her work Madame von Lewen advocates the right of women to pursue the study of the arts and sciences. She survived her husband three years, dying at Leuquitz in August, 1664.

Quite a different character to the former was Gabrielle Emelie de Breteuil, Marquise du Châtlet. This remarkable woman was born on the 17th of December, 1706. At an early age she evinced great aptitude for the acquisition of knowledge. She studied Latin and Italian with her father, the Baron de Breteuil, and became very proficient in those languages. It was, however, to the study of mathematics and the physical sciences that she gave herself with the greatest ardour. She first made herself known to the scientific world by an essay which she wrote for the prize of the Academy of Sciences on the nature of fire. In 1740 she published at Paris her "*Institutions de Physique*," a second edition of which appeared at Amsterdam in 1742. The work is in the form of a series of letters to her son. In it the systems of Leibnitz and of Newton (the latter then almost new in France) are explained in a familiar style, and with a degree of knowledge of the history of the subject treated, and of sound language and ideas in their discussion, which one reads with surprise, remembering that they were the production of a Frenchwoman thirty years of age, and written very few years after the first introduction of the Newtonian philosophy into France. She takes that intermediate view between the refusal to admit the hypothesis of attraction and the assertion of it as a primary quality of matter, from which, perhaps, very few who consider the subject would now dissent. At the end of the work there is an epistolary discussion with M. de Mairan on the living principle in matter, the meta-

physical part of which then created much controversy. But the Marquise de Châtlet's great work was the translation into French of Newton's "Principia." It was published at Paris in 1756, several years after her death, with a "preface historique" and an *éloge* in verse, by Voltaire, who probably owed to Madame Châtlet the smattering of knowledge upon which he wrote his "Exeuiens de la Philosophie de Newton." Voltaire's works are the chief source of the little we know concerning this talented woman, and what he tells us strikes by its brilliancy more than it instructs by its accuracy of detail. He gives evidence of her remarkable versatility in the fact that once, on the same day, she worked at her translation of Newton and played in a comedy, and that her mind sought a respite from severer mathematical studies in the translation of Virgil. Beyond such traits as these, and the fact that the first bed of the newly-born son of this "Minerva of France," as he calls her, was a geometrical folio, he does not deign to go. Lalande afterwards tried to get at some more precise facts concerning her, but in vain. She was married very early to the Marquis of Châtlet, but never seems to have been strongly attached to him; at any rate she readily gave him up for Voltaire. Her *liaison* with the latter furnished no end of anecdotes for the scandalous chronicles of the day; but the state of manners, and particularly the way in which marriages were then contracted in France, are too well known to need comment. She died in the Palace of Luneville, at the Court of Stanislas, where Voltaire was then residing, on the 10th of September, 1749. Her only son came to an unfortunate end. Being imprisoned during the Reign of Terror, he poisoned himself to escape the guillotine.

Eleonore Hevel was the wife of the Burgomaster of Danzig, Joannes Hevel (better known by his Latinised name of Hevelius), one of the most famous astronomers of the seventeenth century. Born of a noble family, in 1611, he devoted himself with great ardour to the study of astronomy, erecting an observatory in his own house and furnishing it with large telescopes of his own construction. From this watch-tower, assisted by competent observers, he kept a constant watch on the nocturnal sky, so that no event could take place there without his being aware of it. In this way he became the discoverer of a new star and several comets. His wife took a zealous part in these nightly vigils, and often continued her labours when her husband's other assistants had quitted their dreary posts. Hevelius, in several of the works with which he has enriched the science of astronomy, speaks of these labours and of the great help they were to

him. He also had her depicted in his "Machina Cœlestis," observing the heavens through an instrument.

Another German woman of note for her astronomical knowledge was Marie Clara Müller. Her father, Herr Einmart, was an astronomer and geographer of Nuremberg, a part only of whose works were ever published. Most of his numerous designs are by the hand of his daughter, especially several figures of eclipses of the sun, sun-spots, and comets, and 235 large maps of the phases of the moon. All these were done between the years 1693 and 1698—a fact which attests her uncommon diligence and perseverance. Marrying subsequently Johann Heinrich Müller, who was likewise an observer of the heavens, as well as an able meteorologist, Marie was called upon to help her husband as she had before helped her father. She possessed great dexterity in astronomical computation, which was of uncommon advantage to Müller, since he could leave all difficult problems to her, certain that they would be quickly and correctly solved.

Maria Margaret Kirch was the wife of Gottfried Kirch, of Guben, an able astronomer and publisher of an almanac. She was born in 1670, and early showed a talent for astronomy. She assisted her husband by computing ephemerides, and many of her observations and discoveries were published in the reports of the French Academy of Sciences. After the death of her husband, in 1700, she continued to carry on the almanac. Astronomical calculators were then rare, and had Madame Kirch not been able to supply the necessary computations of the phases of the moon, eclipses, and other phenomena of the heavens, the almanac would have had to come to an end. She was greatly assisted in her labours by her two daughters. In 1716 she removed from Guben to Berlin, where she received an appointment as *Astronomen* to the Academy. About the same time her son, Christian Frederick, was made a member of the Academies of Berlin and France, and became celebrated through his observations. He now relieved his mother from the arduous duties she had so long fulfilled in connection with the computation of ephemerides. In addition to the above labours, Madame Kirch prepared a work entitled, "Observations of the Comets of 1743"; but it was never published. The original manuscript still exists in the library of the observatory of Dulkova.

Passing over Jeanne Dumée, of whom, unfortunately, we know little more than that she lived at Paris, employed herself with the study of astronomy, and that in 1680 she published a work entitled "Entertiens sur l'opinion de Copernic

touchant la mobilité de la terre," we come to Agnes Manfredi. Her brother, Eustach Manfredi, was one of the most famous Italian Mathematicians. Born at Bologna in 1674, he was in 1698 elected professor of mathematics in the university of that city, and in 1711, astronomer to the Institute of Bologna. He was the author of many learned works on mathematics and astronomy. He was greatly assisted in his observations and calculations by his brother Gabriel, as well as by his sister Agnes. Gabriel also published an able work on mathematics. Agnes, however, never over-stepped the limits of a humble helper: she was satisfied to be able to assist her celebrated brother. What Sir John Herschel sang of his aunt Caroline might with equal truth be said of the sister of Manfredi:—

Here watched our father the wintry night,
And his gaze had been fed with pre-Adamite light;
His labours were lighted by sisterly love, etc.

To be continued.

THE HYDEBOROUGH MYSTERY.

A TALE OF A GREAT CRIME.

BY CAVE NORTH.

CHAPTER XXVIII.

REUNION.

While Letitia was under cross-examination a slight disturbance arose at the door of the court, and every eye was turned in that direction. The usher bawled "Silence in court!" in stentorian tones; which had the effect of increasing the noise instead of repressing it; whereupon the clerk-of-arraigns rose and asked sternly what was the cause of the disturbance. The policeman whose duty it was to keep the door replied that there was a young woman there who demanded admittance; she had a letter addressed to the judge, which she said had something to do with the present trial, and insisted upon giving it to his lordship herself; he added that the young woman further said that the letter had been written by an old man, a neighbour of the prisoner's, who had died during the night.

This announcement caused a stir of expectation in court. Everybody wondered what new thing was going to happen. The judge bade the usher see the young woman, and, peace having been restored, he requested the counsel for the prosecution to proceed with his cross-examination, which he at once did. The usher, followed by Agnes, presently returned, and handed the dead game-keeper's letter to his lordship, who at once broke open the envelope and perused the contents. No expression of surprise was permitted to manifest itself on the calm imperturbable features of the represen-

tative of the majesty of the law ; but after scanning the document critically for a little while, he desired that the young person who brought it should be put forward. Agnes, trembling with agitation, was immediately placed before him, when the following colloquy took place—

Judge : “ How did you come by this letter ? ”

Agnes : “ Please, sir——”

Usher (in a loud whisper) : “ Say ‘ lordship.’ ”

Agnes : “ Please, lordship——”

Usher : “ Your lordship.”

Judge : “ Get away, sir, and let her alone. Now, my good girl, tell me where you got the letter.”

Agnes : “ I got it in William Blagster’s cottage. He died in the night, and we found it there this morning lying on the table.”

Judge : “ Who is William Blagster ? ”

Agnes : “ He was Squire Turnbull’s gamekeeper ; but he has been laid up for a long time ; and last night when I was with him he told me he knew that that would save Pennyfold Drupe’s life ; and he said I was not to fret, because he would make it all right to-day. We did not think he was so near his end : but when I saw the letter I knew what it was for, and so I brought it straight away.”

His lordship asked if there was anyone in court who knew the man Blagster ; whereupon Dr. Gribble answered that he had known and attended Blagster for some time. His lordship asked him if he could identify the writing on the envelope that had contained the letter, at the same time handing it to him. Gribble, after scanning the writing, replied that to the best of his belief it was Blagster’s handwriting ; but at the same time suggested that perhaps Mrs. Drupe, who knew the gamekeeper better than he did, might be able to speak with more certainty. Mrs. Drupe, on being shown the handwriting, identified it at once as Blagster’s.

The judge now leaned forward and conferred with the clerk-of-arraigns, showing him the letter, which he perused with great deliberation ; after which his lordship, addressing the counsel for the prosecution, said—

“ Mr. Plausible, I will ask you to give your attention for a moment to this most remarkable document.”

Mr. Plausible bowed his assent, and straightway stepped up beside the clerk-of-arraigns and read the letter which was put into his hands. He could not conceal his astonishment. Mr. Lake was now drawn into the conference, and, after a little further confabulation, the two counsel returned to their places ; and, Mr. Plausible saying he had no further question to put to the young lady in the witness-box, Letitia was allowed to step down and take her seat again by her father’s side.

Meanwhile the court was on the very tip-toe of excitement and expectation ; and when the judge showed that he was again about to speak there was a dead silence.

Turning to the jury, his lordship spoke as follows : “ Gentlemen

of the jury, a very extraordinary thing has happened. The letter I hold in my hand purports to throw light upon the alleged crime that we are investigating; I shall read it to you presently: meanwhile I must tell you that, although I cannot put this document before you just now as evidence, it nevertheless justifies me in the course I propose to pursue, which is to adjourn the further hearing of the case before you, in order that proper inquiries may be made, and to release the prisoner at the bar on his own recognisances. When you have heard me read this letter, which is the self-accusation of a man now dead, you will I think acknowledge that it is the only proper course I could take. This, then, is the letter—

“October 29th, 18—

“My lord,

“Pennyfold Drupe did not kill and bury the body found near the big ash in Hockley Wood; nor is it the corpse of William Softly, but of my daughter Maud, whom I drew to the wood, and then murdered her, on the 18th January, 18—. She provoked me by her bad ways, and in a fit of madness I committed the crime, and buried her there, taking away her clothes to prevent discovery. May God in His mercy forgive me and her. This is the truth as I am a dying man and hope for pardon: as, witness my signature,

WILLIAM BLAGSTER.’”

To say that the reading of this letter produced a sensation in court is to put the thing far too mildly: something akin to a thrill of horror ran through every one present: for full a minute after the judge had ceased reading a butterfly could have been heard in the place; then a confused murmur arose, which only subsided when his lordship again raised his voice to speak. This time it was to tell the prisoner that he was free to leave the court on his undertaking to appear when called upon.

The court now rapidly emptied; and while many dispersed to their homes, or to public-houses, to discuss the new sensation which had been added to the local real-life romance, a goodly number remained about, eager to see whatever, by way of epilogue, might turn up. Hence, when a quarter-of-an-hour later Pennyfold, supporting his mother, and followed by Agnes and Mr. Marshall, left the court, there was still quite a crowd of people hanging about the outside of the court-house; and the little after-comedy was this. As Pennyfold and company made their exit by one door, Jacob Softly and Letitia came out by another, and so met face to face. Letitia ran forward and held out both her hands to Pennyfold, who clasped them with something like ecstasy. Then the brave, beautiful girl turned to Mrs. Drupe, and with a sweet air of contrition fell on her neck and kissed her. The trembling mother clasped her convulsively to her breast, and murmured: “Thrice blessed art thou, my daughter: thou hast won and saved my son!” and, so saying, her head sank upon Letitia’s shoulder with a sob.

While this little episode was enacting in the portico, who should

appear at the foot of the steps leading thereto but Rice and Fangast. They had met at the station, and coming to the court together, had learned the extraordinary turn events had taken. Fangast stepped up to the group and, raising his hat to the ladies, congratulated Pennyfold on his liberation—and not with a bad grace either.

But a stranger thing still now happened. The auctioneer was addressing himself to Miss Softly, Mr. Rice was talking to Jacob, and Pennyfold was attending to his mother, who appeared to be in a broken and sinking condition. Jacob was considerably confabagastered, as he put it, by the turn things had taken, and he stood with a confused air looking toward the street, paying very little attention apparently to what his companion was saying. Mr. Rice, who had been observing that conscience was after all the best detective, suddenly noticed the usual smirk fade from the face of the ex-play-actor, who was looking over his shoulder, and give place to a large-eyed stare: then followed a gape of astonishment and an exclamation that made the detective turn quickly round: he too started, and exclaimed: "Good heavens!" At the same moment the others, or some of the others, caught sight of the same startling object. The next moment the bystanders heard a cry of, "Uncle! Uncle!" and saw Letitia fly down the steps and throw herself into Mr. William Softly's arms—for it was he.

That morning Mr. Hyde, Mr. William Softly's partner, was sitting in his private sanctum, occupied with the day's business, and thinking of nothing else, when the door opened and an aged man, clad in shabby habiliments, his grey head covered with a crumpled and soiled felt hat, entered. It was so unusual a thing for anyone to enter there without knocking that Mr. Hyde looked up in amaze, and with a frown on his brow; but on seeing the person before him he gave a sudden start, and rising from his seat, exclaimed—

"Why, William!"

"Well, John!" replied the other. "You see I have come back!"

"Yes," said Mr. Hyde, "I see; and right glad I am to see you; but where ever have you been all this time?"

His partner passed his hand across his brow, and for a moment the smile that had illumined his pale visage faded away; but the cloud was only transitory: in a moment he answered: "It would be a long story to tell now, John; but in the hands of God always, and miraculously preserved. How are they at home?" (this falteringly).

"As well as can be expected," returned the junior partner. "But you come home in such an unusual guise that you amaze me. What has been the matter?"

Mr. Softly looked solemnly round, as if to make sure there was no one present, then tapped his forehead significantly and uttered the word—"Alienated."

Mr. Hyde threw up his hands, and looked somewhat aghast.

"But I am all right now," he added: "cured miraculously by my native air."

"Thank God you are back safe and sound," ejaculated Mr. Hyde, shaking his partner's hand for the second time. "But what trouble you have given us! Everybody thought you were dead—murdered, or— But that reminds me! Come quickly! Throw off that hat and coat and put on these! They have hung on your peg ever since you went away, and I have had them brushed regularly, as though you were here. There! Come! They are trying Pennyfold Drupe for murdering you!"

"Pennyfold Drupe for murdering me!" repeated Mr. Softly in amazement. "What next?"

"What indeed! But it is true: because he was the last person seen with you," explained Mr. Hyde, hurriedly.

"Ah, yes! I remember; and I made an appointment to see him the next day. If I mistake not it was to say something about himself and Letty. Poor Letty! she had quite stolen his heart away: I had seen that a long time. Well, I shall be in time to save him and to make them both happy yet. I did not quite approve of it when I first noticed his inclination that way; but in the end, when I saw how strong their affection was, I decided not to stand in the way. It is not a good thing to put hindrances in the way of loving hearts, is it, John? we know that—you and I."

They now set out for the court, and Mr. Hyde led his partner by the most unfrequented ways; so that they went along almost unrecognised. Mr. Softly seemed much changed, and chatted away in a manner quite unusual to him. Mr. Hyde put it down to his pleasure at getting home again.

"How long have I been away, John?" said Mr. Softly, at length. "I have not been able to make it out yet."

"Just over a year," replied Mr. Hyde.

"So long as that!" exclaimed his partner. "And poor Jane, how does she stand it?"

"Poorly," said Mr. Hyde: "she will be right glad to see you."

"I warrant you she will. Let us haste and set this matter right about Pennyfold, and then we will go at once and see Jane. It will cause a bit of surprise to see me, the murdered man, walk into court, won't it?"

As they turned into the main street several persons recognised the ex-mayor, and either stood staring at him and his companion in blank amazement, or eagerly followed after them towards the court, where they seemed to understand by a natural instinct that there must be something of a scene. What they saw when the supposed murdered man reached the County Hall was a young lady rush into his arms and an elderly man go up to him and shake his hand with genuine emotion. Then the ex-mayor caught sight of Pennyfold supporting his drooping mother and, disengaging himself from Jacob and Letitia, he went to him and said: "So you too, Pennyfold, have had your trials: thank God they are now at an end," and pressed his hand fervently.

In the meantime quite a crowd had collected in the portico and

on the steps, and set up such a shout (having learned the extraordinary thing that had happened) that the police about the court hastened to the spot to see what was the matter. Mr. Farrel, the chief constable, came with the others, and after expressing his surprise, and at the same time his extreme pleasure, invited Mr. Softly and his friends to take refuge in his office for a few minutes until the crowd had dispersed. The crowd, however, had no present intention of going away, but stayed and cheered until the supposed murdered man and the alleged murderer drove away together with their friends in the direction of Elm Tree House. The only person who witnessed the happy reunion that did not stay to congratulate or cheer was Jerome Fangast: he walked away under cover of the crowd, ashamed and crestfallen.

CHAPTER XXIX.

CONCLUSION.

There is but little to add to our story. It is necessary perhaps to say that Pennyfold and Letitia were married in due course; but their marriage was delayed nearly a-year-and-a-half in consequence of the illness and death of Mrs. Drupe. The wonderful and, as it appeared, miraculous strength and fortitude which the good woman displayed during her late terrible trials were, as the sequel only too clearly proved, manifested at the expense of what reserve of vitality she possessed; and after the strain was over the effect only too soon began to make itself visible. Three weeks after her son's discharge she had a severe paralytic stroke, which rendered her as helpless as she had previously been. For a month or two her life seemed to hang in the balance, and Dr. Gribble assured her friends that another attack would surely end her days. Her sufferings, however, were much softened to her by the sight of her son's happiness. Everything turned out unexpectedly well with him. Within a few days of his return to freedom and to life, Pennyfold succeeded in completing and perfecting his chemical discovery; and one of the foremost men of the town, whose attention had been called to the young chemist by the trial, and who hastened to make his acquaintance after his discharge, proposed to him the establishment in Hydeborough of a manufactory for the utilisation of his discovery, which had a wide applicability to the needs of every-day life.

The manufactory was duly established, and Pennyfold installed as the practical chemist of the concern. Orders began to flow in before they were ready to execute them, and business increased to such an extent that within six months of starting they had to enlarge their premises. Drupe worked early and late, and was as eager to start in the morning as he was loth to leave off at night. His poor mother was for ever cautioning him about his long hours, telling him he would wear himself out and be an old man before his time. Pennyfold used to answer with a cheery smile: "Don't fret, mother; I am all right; no one ever hurt himself with work who took the delight in it that I do."

"You may feel no harm from it at present," answered the invalid; "but you will do in the long run: rest is necessary, and you never rest."

"I rest all I need; when I need more I will take more; now that I am young and strong I want to work all I can, so that when I grow old I may idle my time away. I can imagine how, when I am in the seer and yellow leaf, I shall like to linger in my arm-chair and to loiter by the way-side, simply to think and dream; but how shall I be able to do that unless I make the most of the advantages of my youth now?"

The proud mother smiled at his enthusiasm, and was grateful to think that the noble youth possessed in such fulness what her own life had so lacked—that vigour of life that best makes life worth living. Now, she thought, were coming compensations for long weary years of disappointments; for her husband's unsuccessful career; for her own anxieties and sufferings; for the toils and aspirations of two broken lives. If the sins of the fathers were visited upon the children, so were their virtues. God was just; His judgments might oftentimes be long deferred, but they were sure. Her son was happy, and in her old age she would rejoice and be glad.

But the good woman was only allowed to see the beginning of her son's success; for six months after her first paralytic attack she had another, from which Dr. Gribble prophesied no recovery, and, in accordance with his prediction, after lingering between life and death for a couple of weeks, she quietly passed away.

Pennyfold mourned for his mother with a genuine heart-felt sorrow; and though his marriage had been fixed to take place within a month of her death, he postponed it, with Letitia's consent, for the best part of a year.

Meanwhile, the manufacturing business had gone on prospering, and before his marriage Drupe was enabled to carry out one of the cherished desires of his life, namely, to add a portion of the adjoining meadow to the garden of Hawthornden; and it made the time go quickly to be occupied during his leisure hours with the arranging and planting of it.

Jacob came up every day to see him and to assist him; for Jacob's old aversion to Pennyfold had utterly gone, and they were now the fastest of friends. Indeed, so necessary did it become for Jacob to be near to his future son-in-law that he finally rented Blagster's old cottage, and installed therein himself and his Punch-and-Judy show, which was now never brought out except for his own and his friends' amusement, and in private. On the evening of his daughter's marriage, however, he gave, with Mr. and Mrs. Drupe's permission, a performance in the kitchen of his cottage, and invited all the children of the village to see it. They were delighted, as were also the larger children who filled the back-ground of the humble theatre.

Jacob gradually acquired the name of a worthy but eccentric old gentleman, while his dog Toby was the favourite of everybody in the village, except one old woman, who persisted that the little animal

was an imp of Satan's, or something of the kind. The younger brother never came forward again as candidate for Hydeborough; nor did Jerome Fangast, who, indeed, before long found it well to sell his business and quit his native town for ever, as certain matters not exactly to his credit got bruited about. He was missed for a time at one or two of the clubs and societies, and in the bar-parlour of the "George," but his place was soon filled up. His friend Rice went to London, and gradually rose in his profession, much to the chagrin of one or two whom he helped to rise—with the aid of a rope.

Mr. William Softly lived to be once more Mayor of Hydeborough, and was nevermore troubled with the mysterious malady that had for a time led him among such strange company and brought so much trouble upon his family. His strange and sudden disappearance from Hydeborough was never fully accounted for; but he used to say that he had a vague and indistinct recollection of being struck with the idea that he was commanded to go to Homcaster and do some kind of penance for his and Jacob's mockery of the old beggar in their youth; of walking through the rain to the junction, where he took train for Homcaster; but further than that he could recall nothing, until he began to recover possession of his right mind when removed to the salubrious mountain air of Stepdene.

John Henry Gander and Miss Goosey did not marry. As he had once intimated to Pennyfold, he feared the course of their love ran too smoothly, and therefore could not be true love. This idea preyed upon his mind to such an extent that he finally broke off the match and left Hydeborough: whereupon the young lady, despite her common sense, became disconsolate, neglected her food, and took to reading forlorn verse. She was greatly disappointed, after three weeks of this ascetic regimen, to find that she had not fallen into consumption, or contracted any other mortal sickness, but was as likely for health and length of days as ever; nay, the dieting of herself seemed even to have benefited her, for the roses in her cheeks began to blossom with greater breadth and freshness. This after-bloom it may have been—combined perhaps with her common sense, together possibly with some subtle spiritual quality—that attracted Dr. Gribble's attention and caused him to bid for the place in her affections rendered vacant by John Henry's inconstancy. It is known to the present historian that, in response to this flattering confidence, Miss Goosey confessed to the worthy doctor the mortal nature of the wound she had received at the hands—or should we not say the arms?—of that pitiable and inconstant young man; and that the doctor, nothing daunted, undertook by means of spiritual and other medicaments to effect a perfect and speedy cure—and succeeded. The wise man! Well he knew the nature of such sicknesses and the panacea therefor. As proof of the perfect cure effected, it is recorded that within one week the patient began to take her meals with the most commendable regularity, and that within three weeks she had developed a keen taste for the study of archeology of the most abstruse kind, and was suspected of dipping

in secret into several other recondite ologies in which the doctor dabbled. Within a month Gander was nowhere, so far as his late fiancée's affections were concerned; he might never have broused on those rich pastures; and had he returned at that time, arrayed like King Solomon in all his glory, he would have stood no chance of fluttering that constant heart—at least not much.

John Henry tried it a little later—we are speaking now of a period about a year subsequent to the events recorded in the preceding chapter—he wrote from a distant colony, whither he had been dragged at the skirts of a fascinating but imperious damsel, that penitent, and doubly convinced of her exceptional charms and virtues, he was ready to return and give hostages for his future dutifulness and good behaviour, if she would but vouchsafe her forgiveness. Strange irony of that remorseless providence that laughs at us when we are most disposed to weep, and perhaps weeps when we are most inclined to laugh!—his erewhile love received this contrite missive on her wedding-day! “Miss Goosey, indeed! Mrs. Gribble, if you please, Sir!”

In due course the repentant lover received his reply. It was contained in a copy of the *Hydeborough Observer*, carefully folded and tied up with a piece of worsted, in which the wine and butter of a piece of bride-cake had stained the marriage record of Dr. Gribble and Miss Maria Goosey. Oh, unutterably sweet revenge! In her mind's eye Maria saw John Henry receive and unfold the fateful news-sheet and read the precious announcement; she saw his vacant stare, and the impotent grasp at his unregenerate hair; she guessed the anger in his heart, and——do you think she was not pleased?

One more record and our story is ended. In the *Hydeborough Observer* of a date which it is needless to specify there appeared an article from the pen of that worthy, Job Caudwell, inspired by the marriage of our friends, Pennyfold and Letitia. It was entitled, “The Conclusion of a Romance,” and was as follows:—

“Yesterday, at St. Anne's, was celebrated the marriage of our worthy townsman, Mr. Pennyfold Drupe, with Miss Letita Softly, daughter of Mr. Jacob Softly, of Scaleby, and niece of Mr. William Softly, late Mayor of Hydeborough. In this auspicious event was brought to a happy conclusion one of those romances of every-day life which we know, by frequent iteration of the fact, are stranger than the imaginations of the novelist. Well if all ended as merrily. Few in our town who do not know the story; nevertheless it is worth telling again. Upwards of two years ago, Mr. William Softly, then Mayor of Hydeborough——” etc., etc., recapitulating the narrative, as we already know it, of the mayor's disappearance, which it is not necessary to repeat; then continuing: “Mr. Drupe, a nephew of Mrs. Softly, who resided with his widowed mother at Scaleby, was the last person known to have been with Mr. Softly, and upon him, after awhile, fell suspicion, misled by certain flimsy shades of evidence; one of the chief being his regard for the lady who is now his wife; which, it was imagined, in the supposed opposition of his

uncle to their attachment, supplied motive enough for the doing away of that worthy gentleman. We know now what a tangle the whole thing was, and, knowing the solution, we marvel that the breath of suspicion could have rested for a moment upon so goodly a life. However, all is well that ends well; and in this instance the ending was doubly well. When taken from his home and his business to answer for a crime he had not committed, Mr. Drupe was busily occupied with a discovery calculated almost to revolutionise modern chemistry.”—

Not quite that, Job! but useful nevertheless.

“One only link was necessary to complete the discovery, and that appeared to be almost within his grasp when he was taken and thrown into prison. For long months he lay there alone, in silence, away from his books and his experiments—away from everything that had constituted the activities of his life. To a man of lesser calibre the burden of such an accusation as that laid upon him would have been as a mountain, crushing out all thought—all other feeling: the gloom of the prison walls would have worn itself into his brain, quenching all intellectual life—all higher emotion. But to Mr. Drupe the dark prison was as the quickening cell of the spirit; thought, untrammelled by distracting surroundings, acted with greater freedom, and hovering constantly about the one crux of his discovery necessary to its completion, the illuminating moment at length came and the difficulty was solved. It only remained to put his solution to the test of actual experiment; and no sooner was he set at liberty than his first thought was to hasten to his laboratory and put it to such proof.”—

One of his first thoughts, Job, not the first: he previously spent, as it appeared, much unnecessary time in the company of Miss Softly; possibly studying the chemistry of the colour of her eyes, putting them into the crucible, so to speak, and getting his own full to blindness of their “pigmentary dust:” but we will let Job finish.—

“The test was complete; the victory was won. Well for all of us if we could make our days of darkness and gloom the quickening cells of the spirit, vivifying the dead, dull, and inert in us to greater and better life! Mr. Morris, Mr. Drupe’s present partner, hearing by accident of the latter’s discovery, and appreciating its importance, proposed a partnership; it was accepted, and the thriving firm of Morris and Drupe, manufacturing chemists, is the outcome.”

THE END.

Book Notice.

A Text-Book of Medical Physics. Illustrated. By J. C. DRAPER, M.D.
London: J. and A. Churchill.

Dr. Draper is well known in the United States as an authority on chemistry and physics, and his latest work will not only be of use to those “students and practitioners of medicine” for which it is

intended, but also to many readers wholly unconnected with the science of *Æsculapius*. The ignorance which exists on matters that are going on daily under our eyes is very great, of matters, that is, of which science has long since offered credible, if not always proven, solutions. Many people, for instance, do not know that according to the received theory dew is a condensation of moisture from the air, caused by the low temperature of plants at eventide. Dr. Draper says that, "at sundown, when plants no longer receive warmth from the sun, they continue to radiate off their heat into space. After a time their temperature falls to the point at which moisture from the air will condense. Dew consequently forms on their surfaces. The coating thus produced acts as a protection against a further decline. Other things being equal, deposition of moisture takes place first on surfaces dark and rough, and later on the smooth and light-coloured." And he further observes that the presence of a cloud, by radiating heat back, interferes with this process, and that anything like a screen which can radiate heat back to the plants or other objects acts in the same manner. On the properties of matter, its constitution and various forms of energy, attraction, motion, acoustics, light, heat, and electricity, and of many of the mechanical inventions by which the power of natural forces is applied for our use and advantage, and for demonstration, the author writes fully and clearly, and though many previous works of the kind have appeared, the information has not been more compactly provided. The addition of a good index increases the value of books of this kind, and this excellent feature is present in Dr. Draper's work. The illustrations are indispensable for the comprehension of many facts, and are neatly executed.

Facts and Gossip.

AT present, although patient observers have taught us much concerning the habits of birds, we are still often puzzled by movements among bird communities which appear to be wholly unaccountable. The population of Ratisbon has been much frightened by the sudden disappearance recently of thousands of jackdaws, which dwelt in the spire of the Cathedral of the town, on account of a similar phenomenon occurring before the outbreak of the last cholera epidemic in the place. In Munich a similar phenomenon is also stated to have taken place. Now, it is easy to affirm that there can be no possible connection between the desertion of a locality by the birds who frequent it and the distant approach of cholera. It is remarkable, however, that the belief that birds do foresee and avoid approaching pestilence is very wide-spread, and the fact of their doing so has been very many times recorded. The sailor's belief that when rats leave a vessel she is doomed, is explicable by the supposition that their instinct teaches them that when the planking is rotten and water-soaked it is time to be off. But no such explanation can be given of the recorded migration of birds from their

accustomed haunts. If it be granted that the fact itself is proved, the only explanation can be that the birds perceive some atmospheric deterioration, some condition of unhealthiness which our duller senses are incapable of detecting, and that they accordingly seek the purer air of country regions. —

WHATEVER may be thought of the way in which women are destined to exert their influence in the future, the *Spectator* thinks, no one with any sound judgment will deny that year by year they are destined to exert a greater and greater influence over the course of affairs in the most civilised countries of Europe. If it were only by virtue of the new education they are obtaining, and obtaining with the hearty goodwill of almost all wise men, that must be the consequence. When women know as much of the course of affairs as men know, they will certainly have almost as much to do with guiding it; and, even before that comes about, they will exert an influence more or less proportioned to their knowledge—sometimes more than their knowledge justifies, sometimes less. We do not doubt for a moment that we have quite recently seen, and shall see more and more as time goes on, the result of that greater influence. Causes have already assumed importance to which it is likely enough that men would not, so soon at all events, have attached that importance; other causes are already being treated in a very different manner from any in which men, left to themselves, would have treated them; nay, feminine spokesmen are constantly found venturing on exhortations and menaces which, if they were used by men, would lead to very serious remonstrances, and perhaps to positive penalties, but which, when used by women, pass unchallenged. Among the chief influences which women are likely to exert over the course of affairs, the *Spectator* thinks they will often stimulate most usefully the higher sentiments of men, and sometimes, no doubt—for women are not free from the distortions of feeling to which men are subject—their lower sentiments. But so far as mere feeling is concerned, the women who concern themselves with general affairs will probably improve the moral attitude of men. On the other hand, for a long time to come at least, they will certainly often obscure the problems with which they deal by their impatience of the difficulties and obstacles which beset all human efforts. They will be for ignoring all considerations, however serious, which appear to require delay and deliberation before any important undertaking. They will over-cloud the wiser course with a mist of feeling, and refuse to see the most conspicuous consequences in the purity of their motives. We expect from the new influence which women will exert a greatly increased fervour of sympathy for which is right, and a greatly increased risk of plunging into actions that are at once well-intentioned and practically wrong. We shall have a great deal less scrupulousness and a great deal more enthusiasm; a great deal less hesitation in calling a spade a spade, and a great deal more scorn for those who are anxious to point out the distinction between a spade and a trowel; a great deal less disposition to extenuate what

is plainly bad in motive as well as in consequence, and a great deal more disposition to extenuate doing evil that good may come of it—in a word, a great deal less calmness and discrimination in what we do, and a great deal more impulse and emotion.

ONE would expect to find the dietetic habits of a centenarian reflecting the most approved theories of the faculty on the mode of sustaining life at an advanced age. A friend of M. Chevreul, who entered on his 100th year in September, communicates to one of the French papers a true and detailed account of what the old *savant* took in the shape of food on that day; and it is to be doubted if any physician would be found to recommend such a regimen—which, it may be said, the eminent chemist has practised almost as long as he can remember—as conducive to longevity. His breakfast, which he took in bed at seven, consisted of two eggs, a slice of “*pâté de volaille*,” and a pint of “*café au lait*.” He rose at nine, and after a rather fatiguing day’s work came home to dinner. The meal was composed of a plate of tapioca soup, a mutton-chop, a bunch of grapes, a morsel of cheese, and three glasses of cold water. M. Chevreul never takes wine. Sir Henry Thompson lately recommended farinaceous food and fish as the best form of diet in old age. The French centenarian evidently uses the *farinæ* sparingly; and fish, it is worth noting, he has never tasted. He never takes lunch, and confines himself strictly to the two meals a day, with an interval of twelve hours between them. The luminaries of the faculty, it is safe to say, would not approve of such a dietetic system even for the youngest and healthiest subjects.

A GENTLEMAN who stammered from childhood almost up to manhood gives a very simple remedy for the misfortune: “Go into a room where you will be quiet and alone, get some book that will interest but not excite you, and sit down and read two hours aloud to yourself, keeping your teeth together. Do the same thing every two or three days, or once a week if very tiresome, always taking care to read slowly and distinctly, moving the lips, but not the teeth. Then, when conversing with others, try to speak as slowly and distinctly as possible, and make up your mind that you will not stammer. Well, I tried this remedy, not having much faith in it, I must confess, but willing to do almost anything to cure myself of such an annoying difficulty. I read for two hours aloud with my teeth together. The first result was to make my tongue and jaws ache, that is, while I was reading, and the next to make me feel as if something had loosened my talking apparatus, for I could speak with less difficulty immediately. The change was so great that everyone who knew me remarked it. I repeated the remedy every five or six days for a month and then at longer intervals till cured.”

A NEW YORK merchant noticed, in the progress of years, that each successive book-keeper gradually lost his health, and finally

died of consumption, however vigorous and robust he was on entering his service. At length it occurred to him that the little rear room where the books were kept opened in a back-yard, so surrounded by high walls that no sunshine came into it from one year's end to another. An upper room, well lighted, was immediately prepared, and his clerks had uniform good health ever after.

AT Arbois, his retreat in the Jura, M. Pasteur, is adding the last touches to a method for assuring to animals exemption from hydrophobia. This he will put in practice on his return to Paris, confident that it will also prove efficacious in the case of man. Before his departure for the Jura, M. Pasteur had under treatment a little boy of nine years of age, brought by his parents from Alsace, where he had been knocked down by a mad dog and bitten twice in the haunches, on both legs, and in the hand. It is, we understand, the first time that M. Pasteur has applied his method to the human subject.

EYESIGHT is not improved by civilisation. For instance, in 1812 shortsightedness was almost unknown, now it is very common. We shall, however, eventually remedy this. The proper use and culture of the eye will in the end prevail. Injury to the eye results from not knowing how to use and care for it. Parents know about how far their children can walk, how fast they can run, how high they can jump, but not one in 500 parents know anything about their children's eyes, and how they should be cared for. If they would study this subject more we should have fewer poor eyes.

A MAN with such a ravenous appetite that he can eat a hearty meal twelve times a day has evidently something the matter with him, especially if, despite the enormous amount of nourishment taken he remains lank and cadaverous, and suffers from perpetual pain in the stomach. An American sailor thus circumstanced, finding it impossible, with his slender means, to satisfy his abnormal craving for food, applied recently for admission to the Chicago Marine Hospital, in the hope that science might discover the secret of his prodigious appetite and allay his sufferings. The doctors, after a long course of treatment, succeeded in relieving the patient of the presence of a snake nearly fifteen inches long, which, most strange to say, had given birth to another claimant for the vast amount of food devoured by the unfortunate seaman, whose stomach, in addition, contained other reptiles of a voracious tendency. How they came there, how they developed in size, and actually in one instance gave birth to a young one, are mysteries which have fairly startled the doctors. They could account for the presence of the snake in the stomach on the theory that it was swallowed inadvertently, when quite small. But the problem, how it increased to its present size, is one which they are totally at a loss to solve. Relieved of these unpleasant intruders, the poor fellow who harboured them is now, say the American papers, progressing very satisfactorily towards recovery.

It has, apparently, been reserved for an unknown philosopher of Lincoln, Nebraska, to lay bare the prime secret of psychology—to discover, in fact, the nature and essence of the human soul. This observant man—whose name is not given by the *Boston Herald*, the paper to which we are indebted for an account of the affair, but who is described as “a devout Christian”—seems to have once met with an old soldier who, although one of his legs had been amputated, complained of feeling pain in the limb. The matter weighed upon the mind of the philosopher. He reflected that the phenomenon could only be explained by supposing that man has two material natures, and that the soul, in a condition of such tenuity as to be invisible and impalpable to unaided mortals, is an exact and more or less concrete counterpart of the body. He decided to make experiment. He procured some very powerful lenses, and supplemented them with some undescribed inventions of his own. Then, having called upon a friend who had lost an arm, he levelled his instrument. At once “a world of revelation broke upon him. The dual hand lay beneath the glass.” The philosopher asked his subject to trace letters and words with the forefinger of the missing hand. The man, in imagination, complied; and the observer triumphantly spelled out the sentences which the other had in his mind. This, to the philosophic Lincolnian, was conclusive evidence, and he is now happy in the conviction that he has found “the key of life and death.” His microscope, which must be of exceptionally strong power, would be invaluable to Dr. Koch.

Is it, as a French writer lately endeavoured to prove, a rule that publicists who work in prose are stout, whilst poets are inclined to be thin? We confess to not being in a position to speak with authority on the subject, which has been engaging the attention of the French writer referred to, who furnishes numerous examples in support of his theory. Taking men of letters now dead, he points out that Balzac, Jules Janin, Dumas père, Eugene Sue, and Gautier—all of whom wrote nine-tenths of what they produced in prose—were full-bodied; whilst the sparest authors of the same period—Vigny, Musset, Houssaye, A. de Lamartine, and others he mentions—were all poets, though they occasionally appeared as prose writers. In the present day, to follow up his argument, he points to the leading French prose writers—Zola, Belot, Rouvier, Sarcey, Labiche, and a variety of others whose tendency to obesity is distinct—whereas, on the side of the poets, he names Leconte de Lisle, Rollinat, Catulle Mendes, &c., whose thinness verges on leanness. To give additional weight to his theory, he continues that Dumas fils, Guy de Manpassant, Richepin, and a few other writers, who are neither stout nor thin, representing the middle condition between fulness and spareness, write with equal facility in prose and verse. The popular idea of a poet is certainly not that of a corpulent man, there being apparently something contradictory in fat and versification; but whether the popular idea is corroborated by fact, is a question that would require careful investigation to answer.

Answers to Correspondents.

[Persons sending photographs for remarks on their character under this heading must observe the following conditions :—Each photograph must be accompanied by a stamped and directed envelope, for the return of the photographs ; the photograph, or photographs (for, where possible, two should be sent, one giving a front, the other a side view), must be good and recent ; and, lastly, each application must be accompanied by a remittance (in stamps) of 3s. 6d., for six months' subscription to the MAGAZINE.—ED. P. M.]

J. P. (Dorset).—You have the indications of strong bone and muscle, and a high degree of nervous susceptibility, with scarcely enough vital power and animal life. Your greatest temptation is liability to overdo, over-strain yourself, and take on yourself too severe labours. You think you can do more than you can. You are remarkable for your powers of determination, perseverance, and tenacity of mind. You find it difficult to adapt yourself to circumstances, and to change yourself to purposes. In times of real danger you will be able to go through the severest of trials, and keep up presence of mind. You have independence of spirit, and more pride than vanity. You are candid when you speak, but not forward in talking. You have a good general judgment, and strength of intellect, and possess the power to organise, superintend, and take the lead. Your real place is in some responsible position where you are not required to work hard or expose yourself much. You need a wife who is bland, social, affable, genial in her nature, and has a predominance of the vital and mental temperaments.

J. E. C. (Grimsby).—This gentleman is very highly organised ; is sharp, quick, executive, forcible, industrious ; very earnest and imaginative. He is liable to overdo in various ways, for he cannot very well take things moderately. He has a greedy, hungry, earnest mind, and will always have some motive ahead to attract him, or some impulse behind him to push him. He wants to go by the fastest train, and do everything up by sundown. He has favourable qualities for a speaker, and would be more in his element in that position than any other, for he loves to talk. He has a great range of knowledge ; has a good general memory ; is very apt in describing things, and, as a traveller, would give vivid descriptions of the country he passed through. He should study, and be a scholar and speaker, or be an artist, but avoid taking heavy loads, or hard jobs, where physical labour is required. He needs a wife well balanced, amiable in disposition, highly vital and healthy, and one who takes time to do things. He must take care of his health, and especially his lungs, more than anything else.

J. C. S.—You have a predominance of the motive temperament, and are adapted to physical labour. Your growth and development are slow. You are not characterised for special brilliancy, display, or quickness, but are more disposed to be thorough, strong, and steady. You will not have many crotchets, or be subject to many extravagancies. You have more of the faculties that give practical common sense than those that give an abstract philosophical ten-

dency; are governed by what you see and know; are rather quick of observation, and accurate in your knowledge. Your jokes are of the practical, definite, personal kind. You are comparatively proud, manly, and persevering. You appear to have reverence, respect, and regard for superiors, also the feeling of kindness. You are desirous of adding to the happiness of others. You would make a good practical mechanic, an agent, or overseer, in any business that requires general outdoor exercise. Close confinement to indoor habits or work would not suit your constitution.

T. W. (Queensland).—You are naturally kind, good-hearted, and generous; are frank, candid, and rather blunt-spoken, but under general circumstances are one of the most genial. You are especially social and companionable, and make friends wherever you go. You are strong in your likes and dislikes. You place more value on domestic happiness than many do. You are almost an extravagant lover, and would be willing to leave this world rather than to have no female friends. You have great power of application; are liable to be absent-minded, and have hobbies one after the other. You are a self-made man, and know how to rely on yourself. You are ambitious for distinction; are quite tenacious of your opinion. Your mind is much occupied with moral and religious subjects, and you are willing to promote reforms and improvements. You are much given to reasoning and investigating subjects, and are inclined to present new thoughts, plans, and new modes of doing things to others. Your memory of dates is not first-class, but by association you recall much of the past. You are good to criticise; are sharp and intuitive in your mental operations; are forcible rather than copious in your style of talking; are quite like yourself, and not inclined to imitate any one.

H. P. L.—You have a vigorous organization and a distinct individuality of character. You will stand out by yourself in your work of life, and will be able to go through severe trials without breaking down; for you have great elasticity of organization as well as a great power to recruit and re-energise yourself. You are fairly balanced in body and mind. You work with your whole nature and with your whole powers, in whatever you do; hence when exhausted you are all used up. You have much mind to be gratified; ordinary pleasures are not enough for you. Since a child you have been anxious to do special work in the world; are decidedly executive and industrious. You would prefer to be employed in some public sphere of life where you could aid in giving knowledge and improve others. You have a strong moral and intellectual nature. You have decision of character, and your standard and aims are high. You are more given to reflection than observation; hence more noted for your soundness of judgment than for mere knowledge. You could do best in those studies that require thought and vigour of mind. Be careful about marriage; you need a husband who is amiable, affectionate, and practical, with a lot of common sense and an elevated tone of mind.



THE EARL OF SHAFTESBURY.

THE Phrenological Magazine.

NOVEMBER, 1885.

THE EARL OF SHAFTESBURY.



THE portrait of the dead philanthropist is well worth studying. Look at the noble contour of the face! Behold the firm, deliberative chin. There is no weakness, no vacillation there. It tells of a character well based in steadiness of purpose, and with no lack of warmth, and even ardour, in the pursuit of an object. The same story is told in the upper lip. It is firm and determined, rigid even. There is something of austerity in the long drop of the outer flap of the lip. It indicates precision also, and would be hard but for the fold in the cheek indicating benevolence and hospitality. Then look at the nose. It would be hard to find a more common-sense organ. It is no nose to philander with Greek statues and dream over decayed glories, but is one to deal with the facts of everyday life. It is not weakly, curious, and inquisitive; neither is it suspicious and cynical; nor perhaps very speculative; but it is critical, inductive, argumentative, and with a good deal of originality of method. It is the nose of a banker, a manufacturer, an engineer, a statesman. It is a good, defensive nose, but not the nose of a soldier. It indicates industry and economy, and yet betrays generosity, though without squandering. The eye indicates a cold, clear intellect, with method, and a dry way of marshalling facts; language without wordiness, and a certain facility in dealing with indigested material.

Coming to the brow, we have indication of a sound and precise, though not a great, intellect. Order, calculation, observation, a quick appreciation and ready memory of facts, critical acumen, and knowledge of men: these are some of the salient points. Not much wit, hardly any humour, sense of physical beauty subordinate to the sense of utility, the ideal subject to the moral sense. These limitations give some narrowness to the intellect, and to the intellectual sym-

pathies. But there is no such narrowness of moral sympathy. A man, one would say, almost entirely without imagination, not likely perhaps to condemn a novel as a falsehood long drawn-out, but somewhat that way inclined. His sympathies largely social, because so social himself.

Look at the fulness of the occipital region, especially at the point indicative of love of children and friendship. He would make home the image of heaven here below, and he would consider the one who neglected home and abused its sanctities as the greatest sinner. A man, moreover, of incessant activities, impelled to work, however, more by his sense of duty, and his dissatisfaction with a task unfinished, than by that restless energy which makes men ascend Alpine peaks and burrow amid Arctic ice.

But the glory of the man are his great moral powers, and their uniformity of development. One may often see men with larger Benevolence. But benevolence without the guiding influence of conscience, reverence, and good sense, is as likely to do harm as good. But here conscience, sense of justice, the feeling of duty, take the lead. Then come Veneration, Hope, and Spirituality, the latter perhaps subservient to the others. Although full of faith, founded on the word of promise, he was not a superstitious man. He saw no ghosts, believed in no apparitions, and had a very limited belief in what is called the supernatural. But he had a very clear sense of the divine in the human; and it was his constant aim to foster and educate that divine, and repress the brute and ape.

A fine type of man, and one we need to cultivate in order to make the world the better place we would wish to see it!

Anthony Ashley Cooper, saint, patriot, and philanthropist, was born at St. Giles, Dorset, on the 28th of April, 1801. He was educated at Eton and at Christ Church, Oxford, where he took a first-class in classics in 1822. In 1830 he married Lady Emily Cowper, by whom he had as issue six sons and four daughters. He entered the House of Commons as Member for Woodstock in 1826, and afterwards supported the Administration of Lord Palmerston. The magnitude of the benefits conferred by him on the industrial population of the United Kingdom can scarcely be adequately measured. For more than half-a-century he has been identified with all the chief moral, social, and philanthropic movements of the nation, and his death will be universally regarded as an irreparable loss not only to Great Britain, but also to the cause of humanity throughout the world.

Truly is it said by one of the leading journals of our time that "All the eloquence and cogency of the most brilliant and closely-reasoned of Macaulay's speeches did less, probably, for the cause of the Ten Hours Bill than the simple refusal of Lord Ashley to join Sir Robert Peel's Administration in 1841, on that statesman declining to countenance the legislation which his earnest-minded follower had most at heart. Yet, great as it was, the achievement represented in the passing of the Factory Acts formed but one glorious episode in a consistently noble career. It was not only by those pale and stunted children of our manufacturing districts, by those hapless little ones whose 'weeping in the play-time of the others' sounded with such strange pathos through Elizabeth Barrett's sweet and piteous song—it was not by these alone that the kind heart now for ever stilled was touched. Wherever there was mitigable suffering or remediable wrong, wherever there seemed hope of cheering lowly lots, of brightening dismal lives, of purging physical or moral uncleanness away, there the hand which will labour no more in good works was quick to help and indefatigable to sustain. The humbler the calling, the meaner and more sordid the surroundings, the more ignoble the associations of the worker, the greater, this good Earl felt, was the need, not so much for the charity of actual almsgiving—though that, too, was abundantly bountiful—but for that wider, better, larger beneficence which does not content itself with dropping a coin into an outstretched palm, but grasps the hand of the unfortunate and raises them to their feet. He agreed with Timon, of Athens, that "'Tis not enough to help the feeble up, but to support him after.' How many are there in whom Lord Shaftesbury has begun the work of redemption by teaching them the first lessons of self-respect! The very names of the classes who stand indebted to him for this greatest of human services form a catalogue of the lowliest and—until their benefactor showed them how to rebuke the contempt of the thoughtless—the most despised of workers. To the shoe-blacks, whom he raised out of slouching street Arabs into a bright, alert, intelligent brigade; to other lads, rescued by his efforts from poverty and crime, and educated in training ships to become gallant sailors of the Queen's navy or the mercantile marine; to the costermongers, who first learned from him to show the proverbial mercy of the merciful to their patient beasts; to the little ill-treated drudges of the chimney-sweep, of whose cruel and perilous industry he was so stern a foe; to the flower-girls who owed to him the first public effort to alleviate the hard-

ships and to protect them from the temptations of their calling—to each and all of these the name of Shaftesbury has for years past been a word of love and reverence. Truly there were no limits to his sympathies; they were as boundless as human misery itself. His heart went forth, in the words of our noble Litany, to ‘all that are desolate and oppressed’; it was the one aim of his life to contribute in his day and generation to that work which is invoked from Omnipotence in the tenderest of the Church’s prayers, ‘to comfort and help the weak-hearted, and to raise up them that fall.’ To this he devoted his whole mind and soul; to this he subordinated every worldly interest. A politician of natural weight and authority, an orator of no mean ability, a Liberal among Conservatives and a Conservative among Liberals, he turned aside from his noble passion of loving-kindness to attend to politics only in so far as their course appeared to promote or to obstruct the great movements of social amelioration, and he would be guided by no other consideration in submitting to or shaking off the ties of party.”

Lord Shaftesbury was in thought and feeling a Puritan, and, as such, he was as unswerving in righteousness as he was large-hearted in charity. To enumerate the many benevolent and religious societies of which the noble Earl was a leading and chief member would be to give a long catalogue. The Church Missionary, Church Pastoral Aid, and Ragged School Societies owe him a large debt of gratitude. The British and Foreign Bible Society, of which he was president, celebrated his eightieth birthday with special observances; but the character which best expressed his own tendencies and aims was that of a friend to the poor. His form and features were familiar in the haunts of labour and the homes of the lowly. “Among the lower classes in all parts of London,” says the *Daily Chronicle*, “his name has for several generations past been a household word. After a donkey show had been held in connection with the Golden Lane Mission, a few years ago, Lord Shaftesbury was presented with a noble specimen of a donkey known as ‘Coster.’ The animal, unfortunately, met with an accident while at St. Giles’s House, and was killed; but he was replaced by another donkey, named ‘Jack.’ A characteristic letter with reference to this donkey was in November, 1884, written by his lordship, in answer to an address from Hastings. A political demonstration in opposition to the House of Lords had been organised in the town, at which a number of coroneted donkeys appeared in a cart as symbolical of the

House of Lords. The following was the Earl of Shaftesbury's reply on the subject: 'I am much obliged to you for the account of the address. If those who exhibited their contempt for their peers by ranking them with donkeys at all resembled my donkey Jack, the gift of the costermongers, they would be far superior men to what they are at present. Jack is the most friendly, useful, and sociable creature on the face of the earth. There is an old donkey, forty years of age, maintained at the common expense of my costers in Golden Lane. But what does he do? I asked them last year. Why, he walks about and plays with the children.'"

All of us are more or less familiar with that fine face, where the glory of the saint beamed forth through the delicately chiselled features of the British peer; the noble presence, the tender glance, the expressive countenance, and the silvery voice pleading the cause of the desolate and oppressed; and we all deeply mourn that we shall see that face and form no more. Though denied, by his own wish to sleep side by side with his beloved wife, a place in England's proudest temple, he yet did not lack noble sepulture, for devout men followed him to burial, making great lamentation over him; and the presence of thousands of the lowly and grateful poor, whom he had blessed by his saintly effort, lent a pathos to his funeral far above all earthly pageantry—their bowed heads a finer tribute than the drooping of sable plumes, and their sobs diviner music than the roll of muffled drums, or the pealing of cathedral organs. For such a burial and such a tomb e'en kings might willingly die. Thus sleeps the noble Earl of Shaftesbury, a man whose name will live, not merely in the memory, but also in the hearts of men,—

Because those hearts he comforted and raised;
And where he saw God's images cast down,
Lifted them up again, and wiped the dust
From the worn feature and the disfigured limb.

PHRENOLOGY FOR CHILDREN.—III.

THE MORAL AND RELIGIOUS GROUP.

(a) What faculties come under this group?—(b) What features are noticeable when this group is strongly represented?

(a) The moral and religious group comprise five faculties, which are Conscientiousness, Veneration, Hope, Spirituality, and Benevolence.

(b) As the selfish faculties are necessary to look after the interests of the body, the moral faculties attend to the

spiritual requirements of our natures. They humanize, adorn, and ennoble ; they raise, purify, and elevate us out of thoughts simply upon the present, into contemplations of a future life and hope.

CONSCIENTIOUSNESS.

(a) What is the definition of this faculty ?—(b) Where is it located ?—(c) What is its natural language when large ?—(d) What does the lack of it indicate in a child's character ?—(e) In what characters do you see this faculty prominent ?—(f) How must it be cultivated ?—(g) How does this faculty act with the other organs ?—(h) When large is there any peace in the heart of the sinner ?—(i) Do hardened criminals show Conscientiousness ?—(j) How do children become tempted to hush the voice of conscience ?—(k) How must one avoid the excess of this faculty when morbidly developed ; and how must it be cultivated when small ?

(a) The definition of this faculty, like Firmness, explains itself. We all have a conscience—or ought to have—and this conscience is a monitor or regulator to our actions and thoughts. A monitor you know is a person put in charge to watch over others, and he is responsible if things do not go on right. So we call Conscientiousness our moral watch, or guide. It has a regard for duty and justice ; a sense of obligation and a knowledge of right and wrong principles. It makes a child feel accountable for his own actions. It gives faithfulness and consistency to conduct, and compels him to do right even when evil temptations endeavour to persuade him to do differently.

(b) You will find this organ located each side of Firmness, in front of Approbativeness.

(c) This faculty when excessive in a child makes him particularly sensitive about acting uprightly in everything ; and equally desirous of making others do the same. Mary's Conscientiousness is very large, and her judgment of John's conduct is very severe : she is always criticising him for not doing what *she* says is right, and is unforgiving whenever he fails to keep his promises to the letter. She adheres tenaciously to what she thinks is her duty, and errs on the side of morbidly blaming herself if she has fallen one iota below her standard. Her guilt and sins weigh so heavily upon her that she often feels she cannot be forgiven. Mary is so strictly consistent herself in what she says and does that she cannot understand what makes some people say one thing and mean and do another.

(d) The lack of this faculty in Joe's character shows just the opposite disposition. He is unfortunately disposed

to go astray, and never seems penitent over his short-comings, seldom feels any obligation to do a thing from principle, and just follows his impulses and desires without thinking whether he is doing wrong, and is not often troubled when he makes a deviation from duty. It is sad to see how untruthful he is and how little he cares about his conduct towards others. He will grow up into a very reckless man, faithless in his promises, and with his large Benevolence, will be unscrupulous in the way he spends his money. He even gives it away when he knows he will need it for himself.

(*e*) You find this faculty large in boys who eventually become good financial agents ; good contractors ; high principled lawyers ; statesmen like Washington ; and also in spiritually-minded ministers, scrupulous business men, etc.

(*f*) This faculty can and must be cultivated through great care being bestowed upon those children who lack it, by exerting a strong influence over them while they are very young that they may cultivate and excite what conscience they have and use it prominently. This faculty can be called out by encouraging children to tell their parents their ideas of right and wrong, especially when they have done wrong ; but not by punishing them with the rod, for all the responsibility is then thrown upon the parent, while the child only feels the punishment but does not always see the principle involved. Encourage them to maintain the right through all odds.

(*g*) This faculty of Conscientiousness, my dear children, when large, acts with each of your different faculties. With Approbativeness it raises your ambition to a desire to receive a just estimate of character and work ; with Acquisitiveness it makes you just in receiving proper accounts and dues, but no more ; just in the division of apples and cakes ; with good perceptive faculties it makes you accurate judges of estimates, inclines you to give good weights and measures in business. Conscientiousness with Language and powers of debate makes you give just arguments and an accurate statement of facts ; it will not allow false impressions to be made without correcting them. With Firmness it gives you great strength and tenacity to hold to your opinions of right and wrong ; with Comparison, Causality, and Human Nature it helps you to form correct conclusions and see differences ; with fairness, giving a right balance to your judgment, and enabling you to have an accurate insight into the future ; with Friendship it inclines you to stand up for friends when their characters are maligned, while without some treat their

friends in a shabby way ; with Self-Esteem, you want justice done to your own opinions.

(*h*) When large the sinner or guilty soul has no peace ; though the wrong may exist for years, still sooner or later conscience has its sway and must find vent. There are many cases of children who have been led away by alluring temptations, but afterwards have confessed their wrong doing and gained the sweet relief of a clear conscience.

(*i*) Hardened criminals and even little children who have early become dyed in sin do not show much if any of this faculty, unless their selfish faculties have over-influenced for the time their moral consciousness ; in such a case there is hope that they will be brought to see the true light of their actions.

(*j*) Children are more tempted to disobey their conscience to gratify their appetites than anything else ; hence it was large Alimentiveness that inclined Lucy to take some of the grapes that were put on the side-board for dinner, though her mother had forbidden any one to touch them before they were put on the table. When the dessert was passed round, her mother remarked that some of the grapes had been pulled. She suspected some of the younger children, and asked Jacky if he had been a naughty boy and disobeyed her. "No, Ma," said Jacky, "I really didn't taste any, though a wicked voice said I might try just one." Lucy's conscience could stand it no longer, so she said, before them all, "Mother, I am the disobedient child, for I was tempted, and I did not resist the desire, though I knew we should have some at dinner ; but they do not taste at all nice now."

(*k*) You must guard yourselves from being too exacting. Do not see faults where there are none. Do not carry your anxiety to do your duty to an excessive extreme. Cultivate a forgiving and lenient spirit, especially towards the minor weaknesses and failings of others, and avoid the torments of undue condemnation. At the same time do not, if the organ is small, shirk the right course because it is difficult. Do everything upon principle and keep your conscience bright.

VENERATION.

(*a*) Definition. (*b*) Location. (*c*) What influence does this organ have when large ?—(*d*) Who should call forth Veneration in children ?—(*e*) What different kinds of gods are worshipped ?—(*f*) In whom do we see large Veneration ?—(*g*) What are the indications of small Veneration ?—(*h*) To what does the excess of this faculty lead ?

(*a*) The definition of this faculty is to have respect for,

and to recognise a superiority in, one's elders ; to be conscious of a higher power, a divine Spirit who governs the universe. It gives the spirit of adoration, devotion, reverence, and deference ; also a regard for sacred things, anything old or ancient.

(*b*) Veneration is located between Firmness and Benevolence, which is immediately in front. It is the centre of the top head — emblematic of the highest and most exalted position in the brain.

(*c*) Children who have this faculty large feel their utter dependence upon their elders. They feel their unworthiness when compared with the divine character of their Creator, who is shaping their lives. They are respectful to their superiors, deferential to old and sacred relics, and are worshipful, quiet, devotional, and inclined to pay strict attention to all due forms and ceremonies connected with religious exercises. Children are often more careful in carrying out the letter in religious forms and ceremonies than when they grow older. They stand in great awe of God, yet love to adore Him like a father, and feel His eye upon them continually. They also respect the aged and are mindful of their wants. When grandma is in the room the door is never slammed. Veneration often makes a little girl shy if she is asked to go into the company of older people. Emily never lost her shyness, her elder sister said, even when she mixed with her equals on an equality, she always under-valued herself and venerated her friends beyond their due. She also paid great respect to places of worship, and had a sense of the holy and sacred.

(*d*) Parents and teachers should call out this faculty in children when it is deficient, by encouraging those under their care to show true and proper respect while young. Elders are much at fault in this respect, and should examine their conduct before their children more closely. It is too late to ask your son at twenty-one why he has no more respect for you when you have taken no trouble to encourage that feature in him.

(*e*) We venerate things as well as persons. Our veneration for God as our Father leads us to have an admiration for all the things He has created. We admire the flowers, the hills, the valleys, the picturesque river-sides, the glorious sun, moon, and stars. Many nations worship the last three, besides many kinds of animals, like the crocodiles, etc., to which the women of the East throw their little babes ; also images made with hands, whom they call gods. We also venerate old works of art, old ruins, and old books and relics.

(*f*) We see large Veneration in boys who eventually become members of the Antiquarian Society; also in members of the High Church party.

(*g*) Children without this faculty are generally disobedient and disrespectful, and seem to have no regard for their superiors; especially do we find this the case with boys, who speak to their fathers and mothers as though they were their schoolmates. They are rude and noisy when visitors call, and inconsiderate in what they do and say. They destroy the old without any regard to sacredness. In fact it is small Veneration that makes boys delight in giving annoyances and seeing aged cripples in distress. Boys also whistle and throw balls of paper at the very times and places when they should not, and talk lightly of religious matters, and have but a superficial notion of divinity, instead of a deep, all-pervading one.

(*h*) An excess of this faculty, remember, unless carefully guided by the other faculties, leads to superstitious worship, and idolatry; it also gives deferential worship to things and persons unworthy of it, and leads to abject adoration, instead of loving, joyous, inspiring respect and devotion.

SPIRITUALITY OR MARVELLOUSNESS.

(*a*) Definition.—(*b*) Location.—(*c*) What have children to believe?—(*d*) Should the influence of this organ be cultivated?—(*e*) What singular beliefs do children have when this faculty is highly stimulated?—(*f*) When small how do children show a want of it?—(*g*) What religious influence does it have?—(*h*) What does the excess lead to? What is the influence of a deficiency? How must the one be restrained and the other cultivated?

(*a*) Definition: This is the faculty that helps a boy to know things apart from experience or reason—in fact, from inspiration. He realises the fact that other agencies are at work that move the material world apart from what are visible to the naked eye. It is closely akin to the imaginative faculties.

(*b*) The locality of this faculty is immediately in front of Hope, on each side of the head.

(*c*) There are many things that all of you children have to believe that you cannot see. One is the working of your brain. You cannot see your own mind think, nor any one else's. You cannot see the circulation of your blood, as you can an engine-wheel rotate; but you know it does circulate, and you have only to prick your finger to prove it; but you cannot see the actual process. You cannot see the lungs breathe, but you are conscious they are doing

their work. It would be nonsense for you to deny that the earth moved round on its axis every day because you could not see it; yet you know such is the case. Thus many things about the stars, the rain, the lightning, thunder, sun, moon, snow, and ice, are marvellous and mysterious as far as our physical eyes are concerned; yet we must accept much knowledge that we cannot clearly understand.

(*d*) Yes; this faculty should be cultivated and encouraged, as we shall see further on.

(*e*) When large or highly stimulated, this faculty gives an extraordinary delight in anything marvellous, novel, spiritual. Hence a child with it largely developed delights to dwell upon the immaterial facts and phases of things; is not satisfied with physical phenomena, but he seeks out the causes that underlie and overlie them, the hidden and mysterious powers that are at work. Clara's mother cannot make her out, for she is always imagining all kinds of unrealities in such a dreamy fashion, and is always creating some new fancies. Tom had large Spirituality, and he grew up to believe in a spiritual existence, a life beyond the physical one. His mind was open to conviction, possessing large Faith; was ready to yield to conviction. You often hear people say children believe all they hear. It is necessary for them to have considerable faith, for their experience is not sufficient to guide them. Unfortunately, some parents and teachers play upon this credulity of children, and tell them for realities about the supposed existence of ghosts, &c., until many children, especially sensitive little girls, are positively afraid of going to bed alone in the dark. We cannot help adding here, that if phrenology were better understood by those who govern the nurseries, no one would dare to impose upon one faculty that was large, or depress another that was already small, especially this faculty.

(*f*) With a small faculty of Spirituality Sam is slow to take a thing for granted; he never will place confidence in anything he cannot understand or see with his own eyes. He does not, as he calls it, "waste much time in thinking upon spiritual things"—in fact, he is incredulous, unbelieving, and unwilling to admit anything; is sceptical, and wants evidence for everything.

(*g*) This faculty greatly lifts our thoughts and prayers out of this world into communion with God, and gives wings to our doubts. The prayer of faith has cured many a man. "According to your faith be it unto you." These were the words of Christ Himself, and Spirituality endorses them.

(*h*) The excess of this faculty, as well as the deficiency,

is harmful for peace of mind. You must all examine your side-heads, where Spirituality is located, and find out whether it is a natural development or a cultivated one. Remember that the excess of this faculty, as well as of others, is harmful, and leads to fanaticism and superstition; and this you must endeavour to counteract; while a deficiency leads to scepticism, incredulity, and inability to trust anything new without abundant proof, which you must increase by mixing with those who have it larger than yourself.

FACE-MEMORY.

IN all trials which, like the extraordinary bigamy case now being tried at the Central Criminal Court, turn upon the evidence for and against identity, we notice an unusual conflict of opinion upon one essential point. Is identification a difficult task or not? Counsel, of course, plead for the side which it is their duty to defend; but they do it in very different ways: one man obviously speaking from his brief, and with a conviction in his own mind that error about identity is not easy, while another strongly believes that a mistake as to identity not only frequently occurs, but is quite natural. He knows he could fall into one, while his junior or rival knows that he could not. Jurymen dispute with each other about identity more than they do about any kind of evidence; while the public, usually quite impartial, take sides with a sort of temper, and a predetermination to believe one side or the other. One-third of all the men you meet regard a defence based upon the allegation "It wasn't me," as *prima facie* absurd and dishonest; while the remaining two-thirds receive it easily, and whatever the result of the trial, are haunted, unless indirect evidence is procurable, with a lasting doubt. The two-thirds do not believe that a woman could mistake her husband, however short either the courtship or married life may have been; while the one-third are only impressed by the circumstance of the missing tooth. We see reason to suspect that there is a cause for this division of opinion, which has never been fully examined, which is akin to colour-blindness, and which positively differentiates the value of human testimony as to identity. Before we state it, however, we must say to begin with that a large proportion of mankind — as any great portrait-painter will testify — never see faces accurately at all. Some are short-sighted, and see no definite edges to anything, and consequently, though unconsciously, rely for identification

on evidence which is not that of sight, and is frequently all wrong. They see the type, but not the true face ; and as a considerable proportion of mankind possess type-faces, distinguished from others of a like kind by differences as minute as those of leaves, the short-sighted are constantly liable to error. So are the inattentive. They fail, sometimes after many interviews, to catch the expression of the face ; cannot state, except in the vaguest way, the colour of eyes or hair ; and will misdescribe features, perhaps prominent features, as if they were paid to do it. They have never attended to the face at all, but have been content with a general impression ; have never observed with any true observation ; and are as little to be trusted in their accounts as women believe most men to be when describing women's dress. They will even confuse dark persons with light, and declare that a long face struck them as a short one, or hesitate, as a witness did in the bigamy case, about the presence or absence of a moustache. Indeed, it is probable that a large section of mankind cannot observe, for of all who land for the first time in India or China, at least half declare that all Indians or Chinese are precisely alike. Yet, though Chinamen have certain broad points of resemblance in colour, shape of brows, and absence of hair, they are in details as different as Europeans ; while Indians, owing to their wide differences in colour, the use or disuse of hair on lip or chin, and the existence among them of features due to varieties of original race, are more different than white men. Inattention is, however, the main cause of error, and is sometimes carried to extraordinary lengths. We have known brothers unable to state the colour of each other's eyes, and fellow-collegians who could not remember whether acquaintances wore the moustache or not.

There may be another explanation of the last fact, however, for there is another cause of mistake as to identity, the operation of which, though seldom noticed, must occasionally be powerful ; and it is to this that we desire just now to direct attention. Is there not evidence sufficient to make it highly probable that the memory for faces is what we call in other departments of life a special memory ? All men are aware that great differences exist among men as to the power of remembering faces, and admit habitually that Smith will recognise them at any distance of time, while Brown is always for a moment or two bewildered or uncertain ; but all men are not aware how very far the difference goes. There are men, and women too, who do not remember faces at all, and who, if compelled to entertain strangers in the evening,

would not know them next day, forgetting their faces as seen under a different light so utterly that evidence of identity hardly convinces them. They simply cannot recollect a face, though they would recollect other things they had seen quite perfectly. The look of the absent has for them perished, and they cannot call it up before them, even in a general way; and this sometimes after much association. We would ask those who doubt this to inquire of themselves about a much more striking development of the same peculiarity. Do they or do they not recollect their own faces? Would they know themselves if they met themselves, say, in the great glass of a tailor's shop? They all, when shaving or dressing, see themselves every day; they all care about their own faces, and they all, therefore, ought, when they meet themselves, to know themselves; but all of them do not. St. James thought none of them did; but he generalized from his personal experience, and fell, as generalizers do, into error. A large proportion of mankind, probably half, do not forget their own faces, but know them perfectly well, detect any casual changes in them, and are aware of likeness to themselves whenever it exists. They would be astounded if they met their "doubles"; and would realise at once, without further evidence, that people who might be mistaken for them were walking about, and might by accident be the involuntary causes of annoying blunders. The remainder, however, forget themselves utterly, instantly, and after the longest possible examination. Surely this wide distinction, which certainly exists, and which any one can test for himself in his own household, points to a special face-memory, the absence or presence of which in a witness will account for many otherwise unintelligible conflicts of evidence. Why should the man or woman who does not know his own face when he or she sees it be expected to be certain as to the face of an acquaintance? There is absolutely no reason in the nature of things for the one forgetfulness more than for the other; and we may rely upon it that with some men both occur, and that, moreover, differentiating marks are often forgotten, and those marks only, so that a man is honestly ready to swear to an identity which does not exist. There is likeness, and for his imperfect face-memory that is sufficient.

We have mentioned the forgetfulness some people display of their own faces as evidence of the existence of a separate face-memory; but there are other testimonies besides. Many men are aware that this memory resides in them in a special degree, though their memories for events, or

stories, or statements in books is by no means equally perfect or ready at command, and the faculty sometimes belongs to the positively stupid. Such men have a memory akin to that of dogs, who, whatever the source of their faculty, cannot be puzzled about identity by any external changes or any lapse of time. Moreover, this memory has been known to depart, from sickness or old age, long before the power of remembering facts has disappeared, and is specially described by doctors and nurses as a loss of the power of recognition, as if recognition and memory were not absolutely identical. They certainly are not, as any one will perceive who revisits a scene well known to him in youth and observe where his perplexities begin, and how he has forgotten, yet remembered, the same things. He remembers, but does not recognise, half the things he is looking at, and knows that while memory tells him they are the same, the memory which we call recognition does not awake. And finally, there is the most singular testimony of all. It is certain that insane persons, who have not to appearance lost their memories, occasionally recognise the wrong persons,—insist, that is, on an identity which does not exist. If a part of the memory can in insanity be perverted to that extent, why should it not in sanity be perverted to a less extent? At all events, that which is perverted stands in some strange way apart from the general memory; and that is our point to-day.—*Spectator*.

THE "BUMPS" OF PUBLIC MEN.

THE following interview appeared in the *Newcastle Daily Leader*, October the 12th.

Twenty years ago Mr. L. N. Fowler, who is now lecturing at the Central Hall, was a slim, active, decidedly American sort of man. Nowadays there is nothing American about him, except the slightest possible drawl. He has aged much; he is rather stout of person; he is fuller in face, and more profuse in beard. His expression, too, has become less searching and more genial. His eyes are as expressive as ever, but the Yankee look is quite gone; and Mr. Fowler might at once be taken for a hearty, good-natured, prosperous Englishman. A representative of the *Leader* said to him the other night:—

"I suppose you would now claim to be the most experienced phrenologist living?"

"Yes," he answered, "I should. I have practised the science more than fifty years. I have written a book on it that has gone through about seventy editions; I have published twenty-five lectures, and delivered hundreds. And, then, for half-a-century past, I have examined from six to sixty heads a day."

"How did you happen to take up an occupation so peculiar?"

"Well, I was one of the first to become interested in phrenology in America. Dr. Charles Coldwell, president of a University in Kentucky, introduced it to his students. My brother and myself became interested. So did Henry Ward Beecher. Beecher began to lecture on it; and so did we. Spurzheim visited the States in 1832, and that confirmed our liking for the science. We have been talking phrenology ever since."

"And when did you first make a profession of it?"

"In 1834. We started to go West, and we trusted to our knowledge of phrenology to pay our way."

"Had you any regular teaching?"

"No. We found out the organs for ourselves. We examined the heads of the students and all the people in the neighbourhood. We also studied character and physical development. The conclusions we came to have been confirmed by subsequent experience."

"Do you consider phrenology an absolutely reliable science?"

"Nearly. The mind is greatly modified by education and circumstances, and, of course, we cannot always tell to what degree."

"Now, for instance, there are men with small, inferior-looking heads, who do much of the great work of the world; and other men with 'good heads,' as they are called, standing behind shop-counters, selling potatoes or fire-irons. How do you account for that?"

"Quality of brains, education, circumstances of life, mental energy, and so on."

"Other men with large brains which appear to be superbly balanced do anything moderately well, but nothing better than anyone else. Doesn't that strike you as being remarkable?"

"No. It is not the finely-balanced brains that always do the striking things. These are more usually the consequence of over-development in some special direction. For a man to do great, striking things he must, in fact, be a little insane. Dryden found that out, you know. 'Great wits to madness

sure are near allied.' Men with very finely-developed heads are often deficient in character."

"What is the measurement of the average brain?"

"Twenty-two inches in circumference at the base; from the opening of one ear to that of the other, over the top of the head, fourteen to fifteen inches. Sir Walter Scott measured sixteen."

"I see you have a portrait of Michael Agelo there. Now, what should you say about his character, judging from his very peculiar bumps?"

"I should call his an extraordinary development, both of brain and body. A man of the most vigorous type, certainly—the executive type. His physical and mental force were both tremendous. He had an extraordinary development of the organs of Form and Size. Colour not so conspicuous; perceptive faculties large; Order extraordinarily large."

"And Mr. Gladstone, whose portrait is also before us?"

"I have not examined his head—that is to say, I have not had my hands on it; but I have studied him much and closely. His head is large and well-marked. He has great perceptive faculties and powers of observation and memory. He is remarkable for pluck, force, and executive ability. He is not a man who goes to extremes. Hope is one of the smallest of his organs. He has great Veneration, Conscientiousness, and Benevolence. I should call his a rather Conservative mind, with something of the moral elevation of the Hebrew prophets. He is cautious, too, and not particularly affable, or easy to influence or to bend. Above all, he is thoroughly in earnest, and he has the physical power to back his intellectual leanings."

"And Mr. Chamberlain?"

"He has a mind which acts very promptly. His power is easily available. He has quick observation, and great memory of events and varied transactions; strong powers of illustration and comparison; an intuitive sort of mind, going straight to its conclusions with little trouble and no loss of time."

"Did you ever examine Mr. Bright's head?"

"Yes. It is an exceptionally good head. Mr. Bright has great vital power, unusual energy, and a sort of magnetism of mind. His feelings are strong, and he has large Combativeness to resist or overcome. He has great Conscientiousness, a high sense of duty and obligation. His sympathies are very strong, and he is constant in his attachments and friendships. He has great perception, great capacity for acquiring knowledge, great power of

comparison and analysis, large Language, and, as in the case of Mr. Chamberlain, a mind of the intuitive sort. I should consider Mr. Bright the most honest and useful and reliable type of man we have got."

"Should you say the same of Lord Randolph Churchill?"

"Not quite. Here is something I have written about him:

"Lord Randolph Churchill is a marked man; he is medium in stature, with a strong neck, a prominent brain, and a predominance of the motive mental temperaments, with less of the vital; hence he is not so strong in controlling animal impulses and passions; but he is active in body and mind, and under the control of the more vigorous and positive powers of his nature. He would create work rather than sit down and take life easily and do only what was necessary. Physically he is active, easy of motion, and has good control of his muscles. His brain is the controlling power of his organization, and his mind is as restless as a Voltaire or a Pitt. The specialty of his mental operations is not deliberation and comprehensiveness so much as quickness, boldness, and force. He has about eight prominent developments of brain, which should have a marked influence on his character and actions. They are Language, Individuality, Causality, Ideality, Firmness, Self-reliance, Combateness, and Destructiveness, and they are none too much restrained by his sympathies, respect, and circumspection; hence they stand out in bold relief, and give him his peculiarities of mind. Language is so large as to enable him to talk easily and copiously, even though he has not much to talk about. He has several of the elements of the orator—not of the John Bright kind, but more of the style of the Earl of Chatham. He could not easily be a smooth, graceful speaker; for, like Chatham, he is too individual and pointed in his style and manner of speaking. His Combateness and Destructiveness give force, severity—even to harshness—and sarcasm; while his strong Self-reliance and great will-power dispose him to speak with authority, and without any qualification."

"Have you studied Lord Salisbury at all?"

"Well, I don't care to commit myself much on that subject. I find it difficult to come to conclusions about him."

"That is the general experience I believe; but couldn't you give me a sort of rough estimate of his character?"

"I think he has a mind of the constructive order. He might have been a good engineer if he had not been a statesman. He has not an originating mind. He is proud, conscious of rank and family, and aristocratic to the core. He is devoted to the forms of religion, and has a particularly

strong sense of property. But there; I ought not to speak without knowing more about him."

"Now, Mr. Fowler, as to phrenology and crime. Have you examined many criminal heads?"

"Hundreds. I once examined forty in one prison. I was right in all cases but one. I said: 'This boy is not a criminal. If he has done anything wrong, he has been urged to it by someone else.' I found he had been convicted of murder, but that he had been bribed to commit the act."

"Among criminals have you found many heads that were not indicative of crime?"

"A great number; but they generally have Secretiveness and Cautiousness, tending to cunning acts. They are the over-smart business people who have been found out. And, by the way, I was once examining a murderer. I didn't know what he was in prison for, but I said: 'This is a gentleman, a gallant, a ladies' man, not a criminal. His crime must have occurred through a woman.' I found he had killed a man who had insulted the lady with whom he was walking."

"Leaving criminals, and coming to public men again. Have you examined any poets?"

"Lots. I told one young man he was a poet, and he did nothing ever after but write poetry; and he lived by it too."

"Have you formed any opinion concerning Tennyson's head?"

"Yes. I call his a peculiarly exalted head. He is a poet who has to wait for inspiration. After that, his verse is the result of extreme labour. Browning is a more spontaneous poet. He has what I should call the truly poetic head. He has more genius than he can bring to bear in the direction of poetry; Tennyson has to work himself up into the feeling."

"And your American poets?"

"I have examined Bryant. He had an exquisite temperament, of the highly nervous feminine type. He was delicate in organization; had excessive Benevolence, Reverence, and Comparison. All the central portions of the brain were exceptionally large. It was a quite unselfish head, with no tact or worldly wisdom."

"And now for my last question. Do you believe phrenology to be a useful science? Can you, for example, by feeling the bumps, of young people say, give them sound advice as to the employments for which they are most suited?"

"Certainly; I have done it in thousands of cases, and have watched the results in some. Phrenology is a very useful science indeed; but, the good brain being there, the good character is needed also to put it to its best uses."

FEMALE ASTRONOMERS.—II.

Perhaps the most celebrated of female astronomical calculators, however, was Nicole-Reine Stable Lepante, who was born on the 5th of January, 1723, in the Hotel Luxemburg, at Paris. Her father was in the service of the Dowager Queen of Spain, who inhabited that palace. From her earliest youth Nicole-Reine manifested an extraordinary impulse to study. In the words of Lalande, "she literally devoured books." In 1748 she became the wife of Lepante, a celebrated watchmaker of Paris, and *horloger du roi*. She and her husband formed a close and, as it proved, life-long friendship with Lalande, who was astronomical observer in the palace of Luxemburg. Madame Lepante observed, computed, and gave elucidations of her husband's work. Together they prepared a book of instruction on watch-making, in which she described the idea of a watch which, with a single finger, would give the mean and true time, the contrivance by which this was effected, being by means of a curve of equation on the dial-plate. She also reckoned a complete table for the length of the pendulum and the diadrom agreeing with it, which was appended to the work. But her greatest work was connected with the expected reappearance of Halley's comet in 1758. On the appearance of the comet of 1682, Halley observed its position with great care, and with wonderful pains computed the elements of its orbits, with the result that he felt warranted in the belief that it would return at regular intervals of about seventy-five years. The comet appeared with certainty in 1531, and again in 1607; and from an examination of all the facts, and with full confidence in his computations, Halley ventured the prediction, that the same comet would reappear about the close of 1758, or the beginning of 1759. As the period approached for the verification of this extraordinary prediction, the greatest interest was manifested among astronomers, and efforts were made to forecast its coming with greater accuracy, by computing the disturbing effects of the larger planets within the sphere of whose influence the comet might pass. This was a new and difficult branch of astronomical science, and it would be impossible to convey the least idea of the enormous labour which was gone through by Clairaut and Lalande, in computing the perturbations of this comet through a period of two revolutions, or one hundred and fifty years. When Clairaut first invited Lalande to assist him he hesitated, but at length said: "If Madame Lepante will help me I might

venture ; for besides her I know of no one who could render any assistance. Madame Lepante consented, and the computation was successfully accomplished ; but it was an herculean labour. " During six months," says Lalande, " we calculated from morning till night, sometimes even at meals. . . . The assistance rendered by Madame Lepante was such, that without her we never should have dared to undertake the enormous labour in which it was necessary to calculate the distance of each of the two planets, Jupiter and Saturn, from the comet, separately for every degree, for one hundred and fifty years. Clairaut announced that the comet would be retarded one hundred days by the influence of Saturn, and five hundred and eighteen days by the action of Jupiter ; he therefore fixed its perihelion passage for the 13th of April, 1759, stating, at the same time, that the result might be inaccurate by some thirty days either way, in consequence of being pressed for time, and so being forced to neglect some small perturbations. These results were presented to the Academy of Sciences on the 14th of November, 1758, and on the 25th of the following December, the long expected wanderer was caught sight of by a peasant near Dresden. On the 21st of January it was seen by Messier in Paris, and soon after in many other places. It passed its perihelion on the 25th of March, thus crowning with triumph the eminent French mathematicians, who had actually computed its perihelion passage to within nineteen days in seventy-six years. Madame Lepante also took part in reckoning the path of the comet of 1762. In 1764 an annular eclipse of the sun was expected ; she computed it for the whole of Europe, and published two maps, one of which showed the course of the eclipse through Europe every fifteen minutes, while the other represented its phases for Paris. Madame Lepante was a Member of the Academy of Bezieres, the transactions of which contain many contributions by her hand ; among others a computation of the transit of Venus of the year 1761. For fifteen years, that is from 1759 to 1774, she helped in computing for the *Connaissance des Temps*, until another academician would undertake the arduous task. She then undertook the calculating of the ephemerides of the sun, moon, and planets, which she reckoned for ten years forward. It need hardly be said that Madame Lepante had to deny herself the enjoyment of many of the amenities of life in order thus to make use of her talents. A hard trial was reserved for the evening of her life. Her husband became ill, fell into a state of deep melancholy, and ended by becoming mad. She at once gave up the society in which she had

shone by her talents ; left off the learned labours to which she had so long and so zealously devoted herself ; and gave herself up to him alone. Removing from Paris to St. Cloud, she hoped the purer air of the country would have a good effect on her husband's health ; but she was doomed to disappointment. For seven long years she gave her every care and every thought to him, until at length, worn out by her exertions, she was thrown on a bed of sickness, and died on the 6th of December, 1788.

Marie Jeanne Lefrançois de Lalande was married to Michael de Lalande in 1788, and proved a worthy addition to an astronomical family. She had previously been an ardent student of astronomy, but she now threw herself into the subject with renewed vigour. She worked out the hour-tables for Jerome Lalande's *Abrégé de Navigation historique, théorique, et pratique*, in order to find from the altitude of the sun under each latitude, and in each season, the time and also the longitude of the sea. For several years she calculated the places of 3000 stars for the *Connaissance des Temps* ; a still greater number she had reckoned for her uncle. She continued unweariedly in this work, and the great quarto volume of the *Histoire celeste*, so far as concerns the calculations, is in great part, if not almost entirely, her work.

Sir William Herschel is too well known to need any words of introduction here. But it is not so generally known that his sister, Caroline Lucretia, was also an astronomer of no mean note. Caroline was born in the year 1750, and lived in Hanover until 1772, when she came to England to live with her brother. When he turned astronomer she became his constant companion, and took down most of his observations from dictation. On his being appointed private astronomer to George III., she became his secretary and assistant, and in that capacity received a small salary from the king. While discharging her duties to her brother, she carried on a series of independent observations with a small telescope made by her brother. Her special business was to keep a keen watch on the heavens for comets, seven of which she discovered, and in regard to five of which she has the credit of priority of discovery. One of these was Encke's comet, then not known as a periodical one. Several remarkable nebulae and star-clusters included in Sir William's catalogues were discovered by her. In 1793 she published a *Catalogue of Stars taken from Mr. Flamsteed's Observations, &c.* This valuable work was published at the expense of the Royal Society, and contained 561 stars omitted in the British Catalogue. Caroline Herschel lived with her brother during the whole of his

career, shared his labours and distinction, and on his death retired to her native country. She was then seventy-two years of age, and lived to be ninety-eight. Even in her last days she was not idle. She completed the catalogue of nebulae and star-clusters observed by her brother, for which she received a gold medal from the Royal Society. She died in 1848, after an uncommonly long life, distinguished by the most important scientific labours.

It is well known with what munificence Duke Ernest II. of Sax-Coburg Gotha encouraged the study of astronomy, and how Gotha, under his auspices, became, in respect to astronomy, what Weimar became, with reference to poetry, under Carl August. Not so well known is it, however, that his wife, the Duchess Louisa, was not only a promoter of astronomical research like her husband, but also a diligent observer herself. Lalande, in his "Bibliographie Astronomique," calls her "the most learned princess known, who observes and calculates herself in a most surprising manner. One can understand how it was that, under the protection of such a princely house, astronomy made so much progress, and that Zach, Lindenau, and others, who founded the great reputation of the observatory of Seeberg, were able to do greater things than were at that time done in any other part of Germany." Among the first astronomers who enjoyed the protection and actual support of the Duchess was Burchardt, who was recommended to the French astronomers by her, and who made himself known in Paris by his Map of the Moon, and other excellent works. In the year 1798 an astronomical congress was held at Gotha, the only place where at that time such a thing could have taken place. A warning was sent to the Duke from England *qu'un astronome français (Lalande) pourrait très bien s'occuper d'autres revolutions que des revolutions celestes*; and Vega was not only not able to obtain permission to go to Gotha, but was compelled to lay his letter of invitation and his answer before the ministry. But the Duke and Duchess did not let themselves be misled by such machinations. Astronomers from every country assembled at the congress and were received in the heartiest and most honourable manner by the Duke and his wife. They parted with the promise soon to meet again in some other place, but the meeting did not take place: there was but one Gotha then.

Wilhelmine Witte is another woman eminent for her researches in astronomy. She was born in Hanover in 1777, and was married in 1804 to the Hofrath Witte, by whom she had a numerous family. She early showed a predilection for

the study of mathematics, and devoted herself thereto with such diligence that she became thoroughly master of it, even in the highest branches. As astronomy appeared to promise the most remunerative employment for her mathematical abilities, she made that her chosen study. Madame Witte possessed a fine acromatic telescope with which she diligently observed the moon, and at length got the idea of constructing a relief-sphere from the existing charts of the moon, assisted by her own observations. Spheres of the moon had been attempted before, but simply on a plane surface like the common terrestrial globes; the idea of one in relief, therefore, was quite original. Madame Witte had consequently no model to work from, but had to devise everything for herself—mechanical contrivances, implements, manipulation, and materials. She at first made her proportions too small, from the lack of a good lunar chart. This at length she obtained in the *Mappa Selenographica*, which was three feet in diameter. After a year's time she produced a lunar sphere thirteen inches in diameter, and so contrived that each phase and libration could be represented. Where the chart was faulty she supplied the want by observation. The sphere was made of wax and mastic, and was purchased by Frederick William IV. of Prussia. Madame Witte afterwards made another, which came into the possession of Professor Mädler. This talented woman died in 1854, having survived her husband thirteen years. It should be said that she brought up a large family in the most careful manner, although she carried on her scientific labours to the end of her life.

In a list of female astronomers the name of Mrs. Mary Somerville must not be omitted, although it should at the same time be remarked that she did not confine herself to the science of astronomy. Indeed, perhaps no lady had ever such an extensive acquaintance with the physical sciences as she had. She was born in Scotland in the year 1780. Her father, Sir William George Fairfax, was a naval officer. In 1804 she was married to Samuel Grieg, captain and commissioner in the Russian navy, who, being fond of mathematical and astronomical studies, instructed his wife in those pursuits by which she afterwards became celebrated. In 1806 Grieg died, and in 1812 his widow married Dr. William Somerville, of Edinburgh. Mrs. Somerville first became known to the scientific world by some experiments on the magnetic influence of the violet rays of the solar spectrum. Her scientific attainments soon procured for her the acquaintance of Lord Brougham, at whose suggestion she undertook to produce a summary of the "Mecanique Celeste" of

Laplace for the Library of Astronomical Knowledge. The work, however, exceeded the dimensions first contemplated, and was published in an independent form in 1831, with a dedication to Lord Brougham. It was followed in 1834 by a treatise "On the Connection of the Physical Sciences." This work has passed through nine or ten editions in English, and has besides been translated into several European languages. Mrs. Somerville's next work was a treatise on Physical Geography, in two volumes, published in 1848. It has gone through several editions, and has been translated into Italian. Her death is of but recent occurrence.

In addition to the foregoing, we might mention many other women who have distinguished themselves by their scientific researches; among others Madame Kümker, of Hamburg, wife of the astronomer of that place, to whom we are indebted for the discovery of a comet; Maria Mitchel, who laboured for many years in her own observatory at Nantucket, and made many important observations, besides discovering a comet, and was afterwards elected professor of astronomy at Vassar College; the Countess von Matt, of Vienna, the late Mrs. Norman Lockyer, &c.

A. T. S.

THE OLD CORNER SHOP.

A STORY OF VERY POOR HUMANITY.

BY A NEW WRITER.

CHAPTER I.

THE STOCKING OF THE SHOP.

NOT very many years ago there stood at the corner of a long, dismal-looking thoroughfare known as Thornhaugh Street and a narrow street called Parr's Lane, in the town of Kingston-upon-Hull, a small low-fronted shop, which, from the circumstance of its having been previously occupied by a house and sign-painter, who had roughly carved, painted in many colours, and set up over the door the beturbaned head of some Eastern potentate, was nicknamed the 'Caliph's Head.' The house was an old-fashioned one, of two storeys only, with its upper windows close under the overhanging eaves, thus giving it the appearance of having 'no forehead,' as one of the *dramatis personæ* of this story once put it. The shop windows were low; the one fronting Thornhaugh Street projected at least a foot, and thus afforded agreeable shelter in wet weather to vagrant children, who, as they sat in the recess, had the look of sturdy little caryatides. The frontage in the main street included also a second lower window, which gave light to a snug little parlour, and to a private door leading into the dwelling part of

the premises. From the outside the house appeared but small and insignificant; but it was in reality rather a roomy abode, having considerable depth rearwards. It had a back entrance from Parr's Lane through a small garden, or large yard, part whereof was taken up by a shed, evidently built by the late tenant for the storage of his paints and other material.

At the time when my narrative begins the Caliph's Head was tenantless—tenantless, that is, in the common acceptance of the term; for that the house was absolutely without inhabitant the popular rumour of the neighbourhood distinctly contradicted. In short, it was said to be haunted. One good reason why it should be so was that the last tenant, to wit, the painter, had committed suicide in it, or rather in its appurtenance—the shed. The hook to which he had actually hanged himself was still to be seen in the roof-tree; and while the house was yet empty venturesome boys would climb over the garden-wall and point it out to each other through the little cobwebby window.

Poor man! he put an end to his days, said the neighbours, because he was unsuccessful in getting the contract to re-paint Parr's Lane Chapel, which occupied the corner opposite to the shop. The reason why he did not secure the job was a mystery to the neighbourhood; for, argued the gossips, who had more right to it, seeing that the chapel was over against his very door, and that he was a member of the congregation? Besides, had he not calculated what it would cost to the fraction of a penny time and time again? Possibly with the trustees it may have been a question of price alone; but that was a point that these worthy people overlooked, or met with the query: "Why need they stickle about a pound or two if doing the work would have made the man happy and saved his life?" Why, indeed?

However, Orgles died by his own hand, and his unhappy ghost was still haunting the scene of his grievous disappointment. There was no doubt about that; anybody could verify the fact who had the temerity to enter the house after dark. The most extraordinary tales were told of what such a one would experience. There were knockings, screechings, hissings, unearthly howlings, and the Lord knows what besides. These noises might even be heard at times from the street—or so at least the neighbours averred.

No wonder, therefore, that a new tenant was hard to find, and that the house had remained empty for a space of three years—a term which to the vulgar mind is an age; hence it was popularly said that the Caliph's Head had been 'to let' for years and years.

But at length, as summer was verging towards autumn, a tenant was found. It was the common talk of the neighbourhood—to which the Caliph's Head was as the scene of a drama on which the curtain was only temporarily down—that a respectable-looking couple had been twice to look at the house. Then they called again and again, accompanied by sons and daughters; finally, the 'To Let' bill was taken down, shutters were thrown open, workmen were in

for a day or two seeing to unavoidable repairs, and the place was declared habitable. Expectation was now on tiptoe to know what manner of people it was that were about to try their luck in the haunted house.

They had not long to wait; for early one Monday morning a heavily-laden waggon, drawn by two sturdy horses, stopped at the door of the Caliph's Head, and was presently discharging into the road the household goods and chattels and belongings of John Sturdy, artist; the said belongings including his wife, Jane, his sons Raffael and Philip, and two daughters, of which the younger was the present writer. After having been duly scanned and commented upon by those neighbours who happened to be out of bed at that early hour, the furniture was carried indoors, out of sight of the too curious. By breakfast-time everything had been got indoors; but what a state of topsy-turvy the house was in! Nothing was in its place; and if any particular article happened to be wanted it was sure to be found beneath a hundred other things. Still, by dint of steady and persistent work, we managed, towards midnight, to get things somewhat in order. But how tired we all were, and how glad to turn into our beds!

In the morning we set to work again, and by evening everything was 'ship-shape and Bristol-fashion.' We were so satisfied with our two days' work that, like the Lord under other circumstances, we looked at it and found it good. Father, in particular, was so pleased with the assistance we children had given that he suggested to mother that she should give us a little treat; and accordingly she and Murietta went out, and presently returned laden with plumcake and cheesecakes; and after tea we finished up with a game of blindman's buff, which we all most heartily enjoyed. What a game that was! Do people, I wonder, play blindman's buff now?

That was our second night in the house; but it was the first of our real acquaintance with our new home. We knew nothing then of the popular talk about it being haunted, nor of the wagers that were hazarded in the neighbourhood as to the probable duration of our tenancy. Some put it at seven days; some at as many weeks—few longer. As for ourselves, we hardly thought we should outlive the horrors of that night. We had been in bed about an hour when we were awakened by most unearthly noises. I verily believe, if hair ever does stand on end, it did on my head that night. Murietta and I hid ourselves beneath the bed-clothes and trembled with fear. The noises came first from one part of the house, then from another; now they appeared to be under the floor, now in the ceiling, then in the very walls. They were like nothing that any of us had ever heard before. There were screechings; there were howlings; there were hissings and scratchings, and a score other weird and indescribable noises. After awhile they ceased, and we fell asleep; but everybody was thoroughly scared; and in the morning, when each narrated his or her experience, blank amazement sat upon every visage. Father took occasion to

say that if we left a prayer on the threshold of our room no real evil could come in ; but he seemed not a little puzzled.

The third night there was no disturbance ; but in the morning mother and Murietta averred that someone, or something, had been about the house during the night. Doors that had been left shut were found open, and several things had been moved from their places. Father said mother and sister were mistaken ; they thought they had closed the doors when they had not. So said Raffael and Phil. In order to convince the doubters, mother and Mury next night carefully fastened the doors before going to bed and tied each to the jamb with a silk thread. The same result followed : each door was found open in the morning and the thread broken ! All were required to verify the fact with their own eyes. Father laughed, and said : “ Did you come down in the night and open the doors, Daisy ? ” I replied that I would not come down stairs alone in the night for all the world.

Father bought a couple of hooks and fixed on the doors, and at bed-time fastened them firmly. That night the place was like a pandemonium. Lights were put out at ten, and till about eleven all were able calmly and Christianly to enjoy their beauty-sleep ; after that no one got a wink of sleep—beauty or other. Such rattlings ! such scrapings ! such rushings to and fro as of scores of feet ! such moanings and howlings ! It might have been the wind, but it sounded more like the devil ! Never were human beings awakened out of sleep by anything more demoniacal. Everybody sprang erect in bed, and with raised hands tried to keep down their hair, for it seemed as though some invisible power were scalping us—at least I can liken my sensation to nothing else.

Query : Can this standing on end of the hair in moments of horror be a survival from the savage times when every man’s hut or wigwam was liable to sudden inroad, and his and his family’s hair likely to become the trophy of the conqueror ?

At the second scrimmage Raff and Phil sprang out of their bed, whipped off the bed-clothes, and ran with them into father and mother’s chamber, where Mury and I quickly joined them. The noise now seemed to descend to the lower part of the house ; and the males having summoned a little courage, it was decided to take a light and reconnoitre. They descended very cautiously, while we women-folk stood shivering at the bedroom door.

The house, which had received several successive, additions at the hands apparently of a builder who had the most primitive notions of architecture, was a sort of labyrinth of passages and stairways, a step here and a step there, now up, now down, with all kinds of unexpected twists and turnings. The three adventurers descended one brief flight of stairs, advanced along a short passage which brought them to another flight, and opposite a passage leading to the back part of the house, when an unexpected draught suddenly put out the light and left them to scramble back in the dark as best they might. Raffael reached the bedroom first. He vowed that

before the light went out it began to burn blue, and he was sure he saw something white at the end of the passage! It made our blood run cold.

In the morning a close scrutiny of the premises was made, but without discovering anything to throw light on the strange doings of the night. I well remember Uncle Smoothdrop coming in while we were still discussing the subject. He pooh-poohed our fears, said we had been dreaming, or else the cowl on the chimney wanted oiling, or something of the sort. That was uncle's way; he ridiculed everything that was beyond his comprehension, or did not chime in with his views. At the same time he attributed it to father as a grievous fault that he had taken the place without making proper inquiries about it.

"I'm not surprised, however," he said, shaking his head; "it's always the way with you book-learned people. But I wonder at you, Jane," he went on, turning to mother, "brought up as you were (he said 'was,' but we can afford to make him grammatical), in a practical family."

"What would you have had me do?" asked father. "Would you have had me demanded a guarantee that the house was ghost-free?"

"Yes; certainly," uncle replied.

"Did you ever require such a guarantee before taking a house?" asked father.

"No; but I prayed over it, and that's better still."

"And do you suppose that we did not seek guidance over the matter?" mother asked.

"I don't doubt you tried, Jane; but what can you expect when you get mixed up with such new-fangled notions as these so-called Pure Scripture Christians have—pure heresy according to my views. You should have come to our place and we'd 'a' given you a right up-and-down substantial bit o' praying that 'd 'a' defied either ghost or devil, and left you and the house as right as a trivet. There! Good-bye! God bless you! Don't be hurt by what I say. I'm John Blunt, you know."

John Blunt, indeed! And bluntest of all with those who most needed his consideration. But Uncle Smoothdrop seemed always to resent it as a personal affront that father was more refined in his manners than himself, and he imputed it to him as a fault that he, a poor man, should pretend to the feelings and tastes of a gentleman; for although then very poor, father was a gentleman—a gentleman in that he scorned all things mean and low, and was especially gentle to women and children; and I do not know a better test of a gentleman than that.

Father's family, a branch of the Sturdys of Durham, was a very respectable one, and father himself had had an excellent education. He was by profession an artist, and he had formerly held a fairly lucrative appointment as draughtsman to a fashionable architect; but his patron having died, and the business, which had been going to pieces for some time, having become extinct with him, the con-

fidential assistant found himself without work, and with nothing to the good in the shape of a balance at the bank or in the funds ; for father had always lived up to his income, which at the best had never been great. This untoward event happened some three or four years before our story begins ; since which time he had been struggling to support himself and his family by teaching drawing, and doing what other occasional work fell in his way ; precarious at best, and never very lucrative.

We had been living in a more fashionable part of the town ; but something in the nature of a second calamity having befallen us, father found himself obliged to cast about for some additional means of eking out a livelihood ; and after some deliberation he hit upon the idea—the ‘happy idea,’ he called it—of keeping a shop.

Now of all the odd things that happen in this world, the oddest is that father should have been struck with the idea of keeping shop. He had never kept a shop before ; nor, so far as I could ever learn, had any of his relatives or ancestors done such a thing ; so that the talent for keeping shop could neither have come to him by experience, nor yet have descended to him by hereditary transmission. However, he did not think of that ; but when the idea had once struck him nothing would do but he must go into the shop-keeping business. That was father’s way ; he went into everything with such an honest intention that he never could see where failure could come in until it was actually upon him. I remember Uncle Smoothdrop and him talking together about the proposed shop. Uncle seemed to regard it as a kind of joke : perhaps he thought father was not serious in the intention ; or else he wanted to rally him out of the notion. He said inexperienced people thought it so simple a thing to keep a shop ; “and, indeed,” said he, “it is if you happen to have money enough to indulge in the luxury ; but the clever thing is to make a shop keep you ; which, however, is quite another matter.” I thought it very ill-natured of uncle at the time ; but the sequel proved that he was right.

Father, however, was not turned from his purpose by uncle’s badinage. He said to mother and us children : “It is not as if we were going into the thing on an extensive scale ; we will take a small shop, in a populous neighbourhood, and stock it with what everybody must have—eatables ; we will sell good things, and charge but a small profit ; in these things lie the essentials of success, and I feel sure success will attend our efforts. What do you think, mother ?”

Mother always agreed with father, and so she said “Yes.”

Father and mother were the innocentest couple in regard to all the affairs of this world that you ever saw. Of course we children did not know much at this time ; we were all too young and too giddy, except Raffael, our eldest brother. He was eighteen, and a scholar, and so was not expected to know much that was practical. Besides, he took very much after father, although he was if anything more simple. Indeed, some people said he was a little wanting

in what Fuller calls the 'cock-loft'; but that I did not believe, although I must confess he was singularly 'innocent.'

In agreeing to the shop-keeping plan mother made one stipulation; and that was that father should not serve behind the counter himself, but should leave that to herself and Murietta: it would ill-become him, an artist, a gentleman, said mother, to be seen weighing pounds of butter and cutting rashers of bacon.

"Or selling ha'p'orths of lollypops," put in we children.

Father replied that there was nothing necessarily ungentlemanly in doing these things; the ungentlemanly thing was to be above doing any honest work for a living that came to one's hands to do.

However, in this mother had her way, because, she said, it would have a bad effect if any of his remaining pupils should see him behind the counter.

I don't think it would have mattered much if all of the said pupils had seen him waiting on customers, for they were a poor lot, and all of them together did not increase the family income by a pound a week, although father spent a great deal of time over them. But whether they paid little or much made no difference to him; he took a pride in seeing his pupils get on; and the duller they were the more pains he took with them. He used to say that if he were paid according to the trouble he took, his cleverest pupil would have paid him the least, whereas he had paid him the most. This was Harold Fairchild, whom he had lost, and whose loss had been the immediate cause of the plan to go into the grocery and provision business; for the subtraction from a small income of a guinea a week, which was the amount he had paid for his tuition, made all the difference between plenty and penury in our humble home.

And so the irrevocable step was taken; the Caliph's Head was rented; goods and chattels, as we have seen, were duly moved in, and measures were taken for stocking the shop.

When father first conceived the notion of going into this shop-keeping business, as I have said, he talked the matter over with Uncle Smoothdrop; and uncle, after trying to dissuade father from the step, agreed to lend him a hundred pounds or so with which to start the enterprise; or, I ought perhaps to say, in order to be strictly accurate, that he promised mother to lend it; for he had been rallying father about wanting to keep a shop, and said he would do better to put his money on a horse-race than to lend it for such a purpose; upon which mother began to cry at what she considered her brother's 'unfeelingness'; and uncle, not being able to see his sister in tears, for he had a softish streak in him away underneath, said he would not see John, meaning father, want for a hundred pounds or so. But when it came to the point, and father asked him for the money, Smoothdrop pretended to be extremely surprised that father, after the brother-in-lawly advice he had given him, should have decided to take the shop, and, in short, declined to lend him so much as a brass farthing for such a purpose. Father had been used to disappointments all his life, and so this rebuff

did not cut him up so much as it might have done some men under the circumstances ; but it was a bitter pill nevertheless. But all the complaint he made was : "Smoothdrop might have done it without ever feeling the least inconvenience ; but perhaps I was wrong to expect so much of him."

"Oh, John, you are too good-natured," cried mother, wiping the tears from her eyes ; "Enoch ought to be ashamed of himself to refuse after promising as he did. I declare I do not know where he got his disposition from ; it is none of the Smoothdrops'. If I were you I should tell him he had got to lend the money now he has promised you, and, by so doing, got you into this predicament."

Then Raffael said : "I should not do anything of the sort, mother ; I should just let him see we can do without his money."

"Well said, Raff !" put in father, who liked his son's spirit.

"Yes ; but how do without it ?" mother asked.

"Oh, there are ways !" replied Raff ; and then he went on to relate how a certain rich merchant had started in life with only half-a-crown, and how another had not so much even as that, and yet died a millionaire ; and so on ; for Raffael was a great reader, and read not only in English, but in Latin, French, and Italian, and was in consequence looked upon by father as a great genius, and so to be taken into the family counsels. But Raffael's ability stopped at telling what others had done ; if he attempted to do anything himself he invariably made a mess of it.

In consequence of Uncle Smoothdrop's refusal to carry out his promise father found himself in a quandary. All that he could possibly squeeze together of his own unaided effort was about ten pounds, a sum, of course, totally inadequate to stock a shop withal ; and a canvass of all his friends revealed none who were willing and able, or able and willing, to aid him to the extent of another paltry ten. In his perplexity father had recourse to his landlord, to whom he put the case very frankly, and asked him to release him from his agreement. But the landlord was not of that kidney, and he quietly laughed at his new tenant's innocence. Said Mr. Crump : "If I let you go people would say it was the ghost that had driven you out, and I should have the place on my hands for another three years."

"But it will be impossible for me to pay the rent," remonstrated father."

"I must take my chance of that," replied Mr. Crump, casting his eye round upon our furniture.

The result of the interview was that Crump gave father the name of a money-lender, who, he said, would advance him the sum he needed on his own personal security. This man was very appropriately named Grabbit. He was a mean-looking little fellow ; and we all used to say—we children, I mean—that any one might have known from his looks what he was, and that no good could come out of him. But that was after he had treated father so ill ; for

he agreed to lend him twenty-five pounds, although he actually received no more than twenty; the other five Grabbit retained on account of preliminary expenses, and I don't know what besides. In addition to this heavy charge there were fees, fines, and charges at every turn, so that in the long-run, before the loan was done with, Grabbit had added pretty nearly cent. per cent. to his miserable twenty-five pounds.

However, with the twenty pounds thus raised and father's own ten the stocking of the shop began. And what a business it was! I was only a little thing at the time—the youngest of the four; but I was always of an inquisitive turn, and possessed besides a very retentive memory, so that I can recall things that occurred as early as my third year, if not earlier; and I remember this stocking business as if it were but an affair of yesterday.

Uncle Smoothdrop might have been of great assistance to father at this juncture, by his aid and advice; for he had been a shop-keeper himself for many years and was reckoned a good business man; but uncle having prophesied that the venture would be a failure, held aloof for fear his assistance should help to discredit his own prophecy. In our embarrassment mother thought of an old friend who would have been only too glad to aid with his experience; we had not seen him for many years, but it was decided that father should seek him out. When we last saw him he was in the filter trade, and used to call very regularly at our house on his rounds. I remembered him as a fat, good-natured, but rather testy old gentleman, who spent no end of time and much patience in trying to persuade mother to buy a filter; and mother, who was never averse to a little friendly gossip, used to ask him in and give him a glass of beer, and sometimes a bit of bread and cheese into the bargain. Then, presumably in payment, he would tell the most extraordinary stories, which mother would listen to, sewing or knitting industriously the while, apparently with the most implicit faith in the truth of his narration. When he had finished one story, mother would say: "Murietta, fill up Mr. Brown's glass," and she would fill it up, and then he would run on again with his endless prattle; taking care, however, every now and again to put in a word for his filters. I believe mother, who prided herself on her business tact, had the idea that by treating the man so well she was cheapening his wares; although in reality she must have paid for the filter, which he eventually persuaded her to take, twice over by her largesses in the form of beer, tea, etc. For it took fully six months to bring mother to the point of giving a definite order; and even then the final triumph was only won by what I always considered a stroke of genius.

As will probably have been seen, Mr. Brown was not one of those who believe in art for art's sake; his stories all had a moral, and that moral the baneful effects of drinking unfiltered water. He was never at a loss for a startling example or a horror-invoking instance. My young blood was made to curdle times and times

again by his tales. The wonder to me was how any of us could be alive, seeing the impurities we daily imbibed—the millions of animalculi, the gallons of varied spawn, the untold myriads of disease-giving germs! If some of thy listeners took in after years to drinking stronger liquids, with other maggots, than that which they had been accustomed to hear so traduced, the blame be on thy head, ancient babbler!

But to the stroke of genius. Mr. Brown had often referred to the well-known incident of a child that had drunk some unfiltered water and was afterwards found to have its little stomach full of live frogs. So deeply was this catastrophe impressed upon my youthful mind that I never looked upon a child of tender years without wondering if its little inside was free from the loathsome amphibian. But that story did not seem to have the desired effect upon mother; she had become case hardened. One day, however, Brown called just as we were about to sit down to tea, and mother at once asked him to take a cup with us. He accepted the offer and began solemnly to stir the steaming beverage. “Not at every house I call at would I accept a cup of tea, Mrs. Sturdy,” he began.

Mother asked why.

“Because,” he said, “many people fail to let the water thoroughly boil before they pour it over the tea, and untold miseries come from that apparently trifling error.”

We children knew we were about to be thrilled now, and we listened with bated breath, while mother, who loved a horror, said, “Indeed,” in order to draw the babbler on.

“Boiling effectually kills the animalculi and other life-germs in water,” he continued; “and if people were to boil all their water they might do without filtering so far as any danger on that score is concerned; but the water must be thoroughly boiled; otherwise you run the risk of having an accident befall you such as we unfortunately became acquainted with only this morning. A lady who never drank anything else but tea, but who was not always careful that the water boiled properly before using it, was taken a week or two ago with sharp pains in her inside. She consulted her family doctor without obtaining any relief. The pains increased; from the region below the diaphragm they mounted to the heart; she felt as though she was being suffocated. The doctor, judging from her symptoms, thought, and expressed the opinion, that she had taken some impurity in the water she drank. However his science was powerless to save her. The action of her heart grew weaker and weaker; she felt as though an iron band was being tightened about it; and knowing that her end was nigh, she called her family about her, shook hands with them one by one, and addressing them in faltering tones, bade them always be prepared for the latter end, and especially to be careful either to filter or thoroughly boil their water. Suddenly, while she was talking, she gave a scream, gasped for breath once or twice, and was dead. Well, to make a long story short, her family

thought the case so peculiar that they decided to have a post mortem. It was made; and what do you think they found? A large serpent wound about her heart! She had swallowed a young one in her tea, and it had grown and grown inside her and had then mounted to her heart and squeezed her to death. And all this," he concluded, "might have been avoided by thoroughly boiling the water, or what perhaps is simpler and surer, by purchasing a filter."

Mother gave an order for one there and then.

We had lost sight of the old gentleman for some years, and although father spent a couple of days trying to find him, his efforts were in vain. He had given up the filter business and left the neighbourhood in which he had resided. Father now, for the first time, felt his helplessness; nevertheless, thinking that a good will may go a long way, even without experience, he went to work to stock the shop alone, aided only by mother's advice. Both father and mother's good nature was such that they could be gulled to almost any extent, as they undoubtedly were in regard to stocking the Caliph's Head. They were taken in on every hand. Fortunately father was a handy man with tools and was able to do all the needful carpentry work himself. He was equally clever as a painter and decorator, and so very little expenditure was called for under that head. As to actual shop-fittings, such as scales, weights, cannisters, and the like, he was enabled by the payment of a small deposit to get them on very favourable terms — on such favourable terms indeed, that I verily believe the debt might have been left unpaid until Doomsday, and without incurring a cross word or a wry look from the creditor, had he cared so to leave it. He seemed to love his debtors as the Lord loves little children, and possibly for the same reason. How different to old Grabbit! Ah, if all men were like him what would become of the poor!

In short, by the expenditure of about ten pounds father managed to put the place in a state to begin business. In all this he showed his natural talent as a mechanic; but when it came to purchasing goods his good genius left him and he floundered like a live fish in a soup tureen. He went to the wrong shop for almost everything, and so paid a great deal more than he ought, even if he had got a good article, which was not always the case.

It was a wonderful assortment, the first stock of provisions, groceries, and etcetras collected at the Caliph's Head. There was tea, supposedly from China, bought at the big shop in the High Street, where the great Chinaman, with his stolid tea-chest sort of a face and long pig-tail, weighed it out himself; a Chinaman, be it known, who, after jabbering Chinese all day, refreshed himself at night by drinking Irish whisky and speaking a fine Irish brogue in the neighbourhood of Blanket Lane.

Father, in selecting this shop for his tea, rather prided himself on his shrewdness; judging that no store in town was so likely to have the real Simon Pure article as the one where a real live Chinaman

was employed. However, when people afterwards complained of the tea and swore it was nothing but sloe leaves, and Phil one night saw the great Ching-Chang, as he was called, out of his petticoats and in his cups, father blushed at his easy credulity and vowed the world was indeed 'desperately wicked.'

Our ground coffee was no better; it was proved to be nothing but sawdust dyed with bullock's blood and flavoured with a few grains of the real article. The moist sugar was half sand; and as to our butter, the Lord only knows what it was made of. And it was the same story throughout, from A to Z. Desperately wicked, indeed!

The day of opening was a notable one. Great expectation had been raised in the neighbourhood; for one thing because, during the few previous days, we children had called at every house in the neighbourhood and left a card: not an ordinary printed card, be it understood, but a real hand-painted one. Father was a gifted designer and draughtsman; few indeed had a defter hand with the pencil and brush than he. To avoid, therefore, the expense of printing cards, he conceived the notion of painting them, and no sooner was the idea entertained than put into execution. The cards were a little larger than the ordinary 'business' variety. Father himself struck off the designs and left it for us children, all of whom he had taught to use the brush, to fill them in. They bore the ordinary legend: "John Sturdy, grocer and provision dealer, at the Caliph's Head, corner of Thornhaugh Street and Parr's Lane. Your custom respectfully invited. But the designs were innumerable and many of them quaint and beautiful, so that years after we learned that many people in the neighbourhood still possessed them, having framed them and hung them upon their walls. While we were busy distributing these works of art as invitations to trade, father was up a ladder, giving a renovatory touch to the redoubtable Caliph, under whose ægis we were to make or mar our fortunes.

The day of opening was a Saturday; and when at a sufficiently early hour the shutters were taken down by Raffael, assisted by Phil, a small choir of inquisitive children set up a feeble "Hurray," while a few neighbours looked on approvingly from their doorsteps. Father wanted to throw the children some sweets, but mother dissuaded him on the ground that it would disarrange her jars, which she had carefully piled up on one side so that they appeared full when they were in truth only half full.

"Well then," said father, "we must have some goodies done up to give them when they come in for things"; and straightway we girls began to make little 'sugar papers' for the purpose. After seeing that everything was in order and giving a final trial to the bell to see that it worked all right, we went in to breakfast, which had been laid in the little front parlour, so that we might see when anyone approached the shop. We had barely got seated ere the children, who had remained a little distance away so long as they

saw anyone about, crowded round the window and began to comment on its contents.

"Oh, look at them heggs ! baint they white ?" cried one.

"It's not often as hens lay heggs as clean as them," remarked another.

"Haven't they got a lot of goodies ?" exclaimed a little girl.

"An' what a whack o' bacon !" observed a hoarse-voiced boy.

"An' the's some stonies and commonies too ; but not many," put in a small, piping voice.

Then the little ones began to enumerate what they would like to buy.

"I'd like to buy some o' them hundreds-an'-thousands," cried the small, girlish voice.

"I'd like to buy one o' them 'ere tops," chimed in a boyish treble.

"It's not time for tops," replied an older lad.

"They've got kites too, the sillies," remarked a third.

"I'd like to buy fayther one o' them black puddens," observed the hoarse-voiced boy. "He loikes 'em, he does."

Oh, look !" cried another.

"Oh ! Oh ! Oh ! chimed a chorus of voices. Then followed a hearty laugh such as children give forth when they see clown and pantaloon at their tricks.

"What can they be laughing at ?" asked father and mother in a breath ; and, while the others looked out of the window for an explanation, Phil and I ran into the shop to see what was the matter. We were immediately joined by the others ; but no explanation presented itself to our united wits, nor would have done probably, had not the children called out that the cat had stolen a black pudding. But what cat ? We had no domestic animal, feline or other. Several of us thereupon hunted the house to see if by chance a strange cat could have got in ; but we found nothing.

In the midst of the confusion the first customer arrived. It was the wife of the shoemaker who lived a few doors away. Mr. Ray had himself spoken to father a day or two before and promised their custom. "I intend," he had said, "that Mrs. Ray shall be your first customer, because she is the luckiest woman you ever saw ; and she will be sure to bring you good luck." Mrs. Ray had hastened to fulfil the promise. She had with her her youngest born but one, a thick-set little chap of three, who, while his mother was making her purchases, devoured one gratis paper of 'goodies' and clamoured for more. Mrs. Ray took her purchases and left, saying that her husband would send in the money when he had been to the bank. Mother wished she had paid down ; it would have been more lucky she thought ; but father said it would be all right ; it was an honour to have the custom of people like the Rays, who had an account at the bank. But, unfortunately, a little later, Murietta, while passing the shoemaker's door, overheard the butcher's boy say that his master would not supply any more meat until the old bill

was paid ; which piece of news was like a jug of cold water poured down the backs of the household of the Caliph's Head.

But the effect of this initiatory damping wore off during the day, as customer after customer dropped in, and by the evening, when the flow of custom began greatly to increase, it had quite gone.

(*To be continued.*)

Facts and Gossip.

IF the *Ensayo Medico*, of Caracas, may be believed, the seeming impossibility of a tailed man need no longer prove a stumbling-block to the faith of would be Evolutionists. In the last issue to hand of this print the following paragraph occurs : "There has just been an interesting discovery in Paraguay of a tribe of Indians furnished with tails. One day a number of workmen belonging to Tacura Tayu were engaged in cutting grass, when their mules were attacked by Guayacugan Indians, and some of them killed. The workmen pursued them, and succeeded in capturing a little boy of eight years of age. He was taken to Senor Francisco Golrochoe at Posedas, and it was then discovered that he had a tail ten inches long. The boy says that he has a brother who has a tail as long as his own, and that all the tribe have tails." There are clearly no half measures about these tails ; and if boys of eight have them ten inches long, there is no saying what may be the length of the tail of a full-grown man. It would have added to the interest of this information if we had been further told how the tails are worn—whether proudly aloft like that of a colley or in the downcast manner of the cow.

IN his lecture on "Mind and Muscle," delivered a few days ago at the Birmingham Teachers' Association, Dr. Crichton Browne delivered an eulogium on dancing which would have rejoiced the heart of the dancing-master in the "Bourgeois Gentilhomme." After some very interesting remarks on the educational value of different kinds of muscle-work, he added that dancing, if taught at the proper time—that is, very early in life—"may discipline large groups of centres into harmonious action, enlarge the dominion of the will, abolish unseemly muscular tricks and antics, develop the sense of equilibrium, and impart grace and self-confidence." Dr. Browne then gave a vivid picture of the awkwardness displayed at a Scotch funeral by some 200 of the *élite* of a Scotch university city, few of whom could be suspected of having learned to dance. "Most curious was it to notice the facial contortions practised to express a sense of love and sympathy. Gross exaggeration was the commonest fault : and sometimes attempts to avoid this ended in an aspect of callous indifference or positive enjoyment." Dr. Crichton Browne came to the conclusion that even the most distinguished of his countrymen were sadly deficient in muscle-culture, and that they should have been taught dancing in their youth—

“not Scotch reels (though these are very well in their way), but graceful and grace-giving dances.”

IN the writings of Goethe, no less than in his life, we see the limitations which egotism imposes, and which not even his great genius could ever remove. “A man,” said Cromwell, “never rises so high as when he knows not whither he is going.” Although Goethe would fain follow his intuitions and yield himself to the impulse of the moment, his very intuitions had prudence and self-love in them so firmly implanted that he could never escape from wordly considerations. But the old belief of mankind is wisest, which declares that the poet’s inspiration is greater than worldly prudence, and that the oracles are sincere.

No woman will love a man better for being renowned or prominent. Though he be first among men, she will be prouder, not fonder; as is often the case, she will not even be proud. But give her love, appreciation, kindness, and there is no sacrifice she would not make for his content and comfort. The man who loves her well is her hero and king. No less a hero to her though he is not to any other; no less a king though his only kingdom is heart and home. It is a man’s own fault if he is unhappy with his wife in nine cases out of ten. It is a very exceptional woman who will not be all she can to an attentive husband, and a very exceptional one who will not be very disagreeable if she finds herself wilfully neglected.

THE correlation of gray hair, as well as its causes, deserves more attention and study than they have received. Such a change is undoubtedly indicative of some deep-seated psychological process; but what this is we can only ascertain by a much wider series of observations than have yet been submitted to scientific analysis. Many persons begin to show gray hairs while they are yet in their twenties, and some while in their teens. This does not by any means argue a premature decay of the constitution. It is purely local phenomenon, and may co-exist with unusually bodily vigour. The celebrated author and traveller, George Borrow, turned quite gray before he was thirty; but was an extraordinary swimmer and athlete at sixty-five. The spot where grayness begins differs with the individual. The philosopher, Schopenhauer, began to turn gray on the temples, and complacently framed a theory that this is an indication of vigorous mental activity. Race has a marked influence. The traveller, Dr. Orbigny, says that in the many years he spent in South America he never saw a bald Indian, and scarcely ever a gray-haired one. The negroes turn gray more slowly than the whites.

THE *Lancet* believes that no inconsiderable proportion of the colds, attacks of lumbago, and even more formidable results of what are popularly called “chills,” may be traced to the practice of wearing overcoats; “which arrest the ordinary process of evapora-

tion, causing the clothing within to be saturated with accumulated perspiration, and are then removed, when rapid cooling takes place." We are therefore recommended, in view of the approaching winter, to "wear one coat at a time," and to replace a thin one by a thick one on going out of doors. As the *Lancet* appeals on this subject to the "common-sense thinker," feeling assured that "a very little consideration" will suffice to bring him over to its views, it will probably be remembered by many persons that the wearing of a great-coat does not, as a matter of course, "cause the clothing within to be saturated with accumulated perspiration"; also that when a great-coat is taken off, as on entering a warm house or a hot theatre, the effect is not by any means to "cause a rapid chill." It will occur, moreover, to the common-sense thinker that the plan recommended of wearing a thin coat within doors and a thick one in the streets is only practicable on condition that visits are avoided, and that the coat-wearer abstains from entering any place of public amusement. Otherwise, it would be necessary for him to carry an extra coat by which to replace the one worn in the street. The process of dressing and undressing in presence of his friends and of the public would be very trying.

Answers to Correspondents.

[Persons sending photographs for remarks on their character under this heading must observe the following conditions:—Each photograph must be accompanied by a stamped and directed envelope, for the return of the photographs; the photograph, or photographs (for, where possible, two should be sent, one giving a front, the other a side view), must be good and recent; and, lastly, each application must be accompanied by a remittance (in stamps) of 3s. 6d., for six months' subscription to the MAGAZINE.—ED. P. M.]

J. M. WEBBER (Somerset).—You possess an intellectual, sharp, critical, observing, and reasoning mind. You are a close student of human nature; you 'sense' people readily; few things escape your observation. You delight in investigating sciences—such as natural history, botany, &c.—are a great thinker, and have more thoughts than you know what to do with. You always use choice language, and have more power to express your thoughts and ideas in writing than extemporaneously. You appreciate beauty under all its forms; your refinement of mind is quite marked. You have intuition, which makes you very definite in your analysis of matters and things, and keen in your insight of the motives of others; are a good judge of the differences between error and truth. Your likes and dislikes are distinct, and you are continually drawing comparisons in everything you do and say. You have large sympathies, which are of a practical kind and easily drawn out. You do not waste anything—time, money, or influence. You have a great desire to travel and see the world, and wherever you go you always enter heartily into the ways and customs of the people with whom you come in contact; are logical as well as imaginative. Yours is

quite a fruitful and creative intellect. Guard against being too exacting, and avoid worrying your mind about things over which you find by experience you have no control. Do not confine yourself too much to your thoughts, but allow your social nature to have its full influence over your life and character.

A. M. E. (Shoreham).—You possess a very fairly-balanced mind ; one that shows more than ordinary firmness, perseverance, and determination of purpose. You seldom change your opinions, but stick to them, as well as your principles, through great opposition. You are just, and generally consistent in your actions ; careful in keeping your appointments, and rather severe on those who do not. You have some ingenuity and constructive ability, which will show itself in general mechanics, or as a jeweller or practical engineer. Your perceptive faculties are fully represented. You are always investigating principles in a scientific way. You will have many schemes and ideas, which you will long to put to some account. You are constantly studying the uses of things. You know a great deal intuitively. You have the ability to draw, copy, imitate ; and design, and could succeed as an architect. You are not wanting in ability to push your way, and will know how to make your talents available. You enjoy fun and wit when there is some cleverness in it, and can be sarcastic in debate. You know how to draw apt conclusions in your arguments, and will always take care to have science on your side, and will be logical in your style of reasoning. Allow all your mental powers their due influence, and do not be too critical or severe with those who hold contrary opinions to yourself. You will want to be engaged in nice kinds of work, and will be particular how everything is done for you. You appear to have good arithmetical talents, and would make a good book-keeper, cashier, or financial agent ; but something more scientific or mechanical will eventually satisfy your mind the best. Join in debates whenever you have the opportunity, and cultivate your speaking talent.

J. W. H. (Ayrshire).—You have some very good points about your character, the best being your high moral nature. If you become a bad man it will be because you have sold yourself to drink and the devil. Your faults will come from stubbornness, obstinacy, perhaps narrowness in some of your views, may be appetite (though it does not look much like it) ; your virtues form your good nature and willingness to do good when you can, form your religious disposition, and form your conscientiousness. Your natural desire is to follow the better way, not so much because there is a penalty for not following it, but because it is pleasant to you. You have a good intellect, and should be characterised for your understanding, for your comprehension of principles, and for your general philosophical turn. You love wit, and possess a good deal of dry humour of a kind ; are also rather observant, gifted in speech, and capable of making not only a common-sense business man, but a good citizen, and one to be trusted with looking after town affairs.

You have some literary gift, but, if cultivated, there would be likely to be a peculiar streak in it.

J. G. C. writes: "Your delineation of my character is accurate and explicit, although given in the third person instead of the second. I must thank you for your hint about my health."

H. P. L. writes: "I thank you so very much for your notice of my photograph in this month's PHRENOLOGICAL MAGAZINE. You are wonderfully accurate in all you have said, particularly as to my elastic spirits, as, even though yet young, I have had much dreadful sorrow, but have recovered my old spirits."

I. R. (Hooe).—You possess more thoughts and ideas than you know what to do with. Had you more Destructiveness you would be able to make better use of your talents. You have more than ordinary power to understand principles, gather facts, and turn them to some practical end. But you show a little want of executiveness; are too easy and good-hearted, and allow others to push your opinions on one side. You can be firm and determined when you get thoroughly roused, and when your sense of justice is excited. You can defend your friends and principles better than you can overcome the minor annoyances of business life. Your perception of things is very definite, concise, and accurate. You are orderly to a fault, and are much irritated when things are left out of their places. You know how to keep your own counsels. You are quite shrewd and prudent, and generally think twice before you speak or act. Your mind is a refined one, that appreciates cultivated society and refined views of things. You ought with practice to make a good public speaker. You judge of character intuitively.

R. H. (Sunderland).—This youth has a fair organization for study and for intellectual pursuits. He is not over strong, and will need to be careful of his health; although there is no special weakness of a nature to cause alarm. With care he will grow up to be a strong and healthy man. But the chances are that he will always be tender and rather susceptible. He should be put to a calling that would allow him to get some physical exercise and to be outdoors as much as possible. He is not adapted to a rough, hard calling, but should be educated for a trade or profession requiring intelligence, method, delicacy of perception, and taste. He would make a good accountant, a good teacher, a good architect and designer. He has qualifications also for business or for the Church. He is eminently fitted for a place of trust, being conscientious, cautious, and discreet. He appears to be steady, industrious, and capable of finishing his work as he goes along. A great deal depends on his training; but with fair opportunities, and a good education, he can do better than common, not so much because he has got extraordinary ability in any direction, as because he possesses a good tone of mind, a clear intellect, comprehensiveness, and no particular defect. He has some musical gift, and has a taste that might be developed in writing, on a newspaper, for instance.

THE Phrenological Magazine.

DECEMBER, 1885.

WILLIAM THOMAS STEAD.



HE phrenology of this gentleman is rather marked. It displays an uncommon type. The moral brain takes the lead. All the organs in that region are large in development, and one or two of them very large. Conscientiousness takes the lead in the moral counsel of the faculties, and has a powerful, if not a prevailing influence; and with a temperament such as his, highly mental and nervous, it is liable to be morbid. Indeed it would not be surprising to find that there was a tendency to extreme morbidness in this respect in the family. Let the uninstructed reader draw a line from the tip of the ear to the summit of the head, in front of the crown, and notice the length of it. The line passes through Conscientiousness to Firmness, which is also very large, making it almost impossible for him to give up a project once taken in hand and sanctioned by the moral faculties. The height of the crown, too, indicates a large amount of pride, disposing him to judge for himself, be his own master, act independently, and be the controlling spirit in any enterprise he takes hold of. Not less powerful, and even exigent, is the organ of Approbativeness, giving him ambition and a desire to gain fame and distinction. It will be seen from these predominating faculties that the subject is likely to be proud, independent, self-willed, anxious to excel, and to be looked up to, but in all things guided by a sense of duty. Hope, Veneration, and Benevolence are also large, particularly the latter. This gives him a philanthropic bent; but his temperament being of such an active turn he is more disposed to work himself than to be satisfied with giving money and getting others to work. Spirituality also appears to be large, but it may not be so controlling in its influence as some of the other faculties. But it is, anyway, powerful enough to promote views that many would call superstitious.

The social brain seems to be large. Seconded by an ardent temperament, it is probably more powerful in action than the size of the organs alone would indicate. Combateness is well represented; it will make him very ready to defend himself, and still more forward to defend friends or the cause in which he is engaged. Combateness, in conjunction with Destructiveness and his vehement temperament, gives him so much energy that it is sure in time to wear him out; especially as the restraining faculties are not large. He really needs a great deal more Caution and Secretiveness to give a proper balance to his character.

There is a fair development of the faculties that give taste, imagination, and skill, but they are not so strong as to make them leading qualities.

The intellect as a whole is well developed. The observing powers are good, the reflective powers are good; but there appears to be hardly enough Causality to give great breadth of intellect; hence he will be disposed to look at things sectionally, and to see but one thing at a time. It would be well too if there were a little more Wit. He compares well, contrasts well, sees differences and distinctions, and has an analogical way of reasoning; but he is apt to fall into incongruities, for the simple reason that he does not see broadly and as a whole. His memory is good, except it be for dates, figures generally, and isolated events and incidents. He possesses a fair organ of Language; he can marshal his facts well, and in suitable language; but there is no great copiousness of words, and some of the best elements of the orator are wanting. He will, however, make an impressive speaker, because of the ardour and even vehemence of his temperament and the strength of his moral feelings. Few men can express so much indignation as he can: this arises from his sense of justice and his abhorrence of wrong.

To sum up, William Thomas Stead is a man of earnest and exalted nature rather than of great strength and comprehensiveness of mind. He will be noted for his moral earnestness and the fervour of his conviction more than for his intellectual strength. Yet the tone of his mind and the strength of his religious feelings, together with his marked individuality, will give him a good deal of originality in his views and in his modes of action. The organs of Acquisitiveness and Secretiveness are so inferior in development that he cannot be a very selfish man in regard to money matters. He may be an egotist and want his own way and to be the commanding spirit, but he is far from being a greedy, grasping man; nor could he allow his principles to subserve

selfish ends. He should, on the contrary, be noted for his generosity. His lack of restraining power will lead him into many indiscretions and extravagancies, and he will be frequently in hot water; but it is morally impossible for him to be a bad man, or even careless in moral matters, until he has entirely lost the balance of his mind. In types of organization like his such a contingency is not unfrequently the result. When this tension is so great it would be a marvel if the chord did not sometimes snap.



Mr. Stead's name and personality has been so much before the public of late that but few words need be said about him biographically. He 'hails' from the earnest north, where he was born—the son of a Congregational minister. He

received a university education, and then turned his attention to journalism. He made his reputation for energy and enterprise as editor of the *Northern Echo*, published at Darlington. On the retirement of Mr. John Morley from the editorial chair of the *Pall Mall Gazette*, Mr. Stead was appointed to the vacancy. This happened about two years ago. What he did with and through that journal is now matter of history. Without going so far as to justify or endorse all he did, we believe that he effected a good work, and one which will be better judged in after years than now. He has, we think, been subjected to much undeserved obloquy by his colleagues of the London press; not that they intended to be unjust, but they saw things differently to him. It is so difficult to take a broad and far-reaching view. Then they disliked his methods. But, anyway, his detractors are not ungenerous men, and the day will come when they will make him all due amends. As is so often and proverbially the case, he was not a prophet in his own town; at a distance he is judged more generously, and his worth not lost sight of in the manner of his doing it.

THE CORRELATION OF PSYCHOLOGY AND PHYSIOLOGY.

BY DANIEL NOBLE, M.D.

CHAPTER II.

ON EMOTIONAL SENSIBILITY, AND ITS REACTIONS.

THERE is a sensibility more elevated in the psychical scale than either external sensation or the physical appetites; I refer to that all-pervading sense of bodily existence which the German psychologists have named *Cænæsthesis*—general feeling, and sometimes self-feeling (*Selbst-gefühl*). This sensibility connects itself, apparently, with the peripheral termination of nerves throughout the whole body, but more particularly of those supplying the thoracic and abdominal viscera.

It would seem to localise itself in an especial manner about the præcordial region. It will best be indicated psychologically, by use of the popular phraseology, *the spirits*. Under ordinary circumstances, this sense-consciousness is that of bodily contentment—tranquil spirits. When it is exalted, we are said to be in high spirits, glad at heart, joyous; we feel as if there were a spring in every limb; we

are light as a feather. When it is depressed, low spirits are experienced ; we are heavy and dull, and inapt for exertion. Acutely felt, it is *emotion*. These several states of the animal spirits, so designated, may result from purely physical causes, and, in their origin, be quite irrespective of thought. All persons have their general sensibility more or less modified by atmospheric states and by conditions of the viscera. Refer to the recollections of some brilliant morning in early summer ; how cheering the experience. Go back in memory to the gloomy days of a damp November, and recal the dispiriting influence of its fogs and its mists. The relation between visceral states and the animal spirits is the theme of perpetual recognition. Who has not experienced the importance of a sound digestion to the tranquillity of his feelings ?

This general sensibility has sometimes been confounded with common sensation. A moment's reflection, however, upon the respective phenomena should demonstrate their essential difference. Emotional sensibility maintains no sort of uniformity with that which is tactile. On the contrary, when the former is greatly elevated, the sense of touch is sometimes paralysed. Witness the emotional effects observed in heroic enthusiasm, and how merely sensational impressions are disregarded under such circumstances. And the tactile sensibility may be most acute when there is no emotional excitement whatever. When this latter has place to a great extent, a mitigation is often obtained by superinducing the ordinary sense of bodily pain. In that extraordinary epidemic of the middle ages, the dancing mania, so admirably described by Hecker, the paroxysms were most effectually interrupted by blows and kicks, which persons were always found ready to administer ; the operation of these being to bring about sensational, and thereby to weaken emotional, sensibility. During the periods of excitement, the external senses were literally sealed. "While dancing," says Hecker, "they neither saw nor heard, being insensible to external impressions through the senses."

The action of particular medicines suggests a physiological distinction between sensation and emotion. Opium and other such drugs, whilst they depress tactile sensibility, exalt that which is emotional.

Now for the *cœnæsthesis*, or self-feeling, or the emotive sense, as it has been variously designated, there must, I apprehend, be proper ganglia within the encephalon. Dr. Carpenter is with those who refer this function to the same centres as those of the external senses, and particularly to

the ganglionic centres of common sensation. He entertains the opinion, with some other physiologists, that the posterior cerebral ganglia, commonly called the optic thalami, are for the fulfilment of this latter office ; and that the anterior ganglia, the corpora striata, are most likely the source of the respondent movements. I have myself proposed, in the last lecture, that the inferior ganglia of the cerebellum constitute the encephalic centres of common sensation ; and I believe that the optic thalami and corpora striata—the corresponding ganglia of the cerebrum—form the special region of emotional sensibility.

Comparative anatomy would seem, in some measure, to favour this opinion. In the lower forms of vertebrated creatures, the analogues of the corpora striata and optic thalami are exceedingly large in relation to the rest of the encephalon. In fishes, these structures are voluminous, whilst cerebral hemispheres, in some instances, are not discoverable, and, in many others, are purely rudimentary ; and, so far as we can reason concerning the psychology of fishes, we should infer that some inward sensibility, rather than external sensation, principally determined their numerous movements, these being subservient to their self-conservation, and having but little relation, apparently, to outward phenomena. In this view of the case, we should deem their chief sensibility to be emotional in its nature, rather than tactile ; but, of course, not to the exclusion of this latter, though in the watery element there would appear to be no predominant need for it.

The encephalon of birds does not show quite so predominant a size of the ganglia under consideration, the cerebral hemispheres being more developed ; it seems reasonable, however, to refer the instinctive and habitual movements of birds in a great degree to sensibility of an emotional character.

When we come to the mammalia, and the higher we ascend in the scale, the entire conscious life of the different creatures becomes less and less a mere sensibility, and more and more an intelligence. And when we arrive at Man, the highest forms of this latter are attained ; and emotion, as an independent and primary source of movement and conduct, sinks to its lowest point, abundant though it remain.

These circumstances correspond with the relation, as to volume, which the hemispheres of the brain and the cerebral ganglia—optic thalami and corpora striata—maintain towards each other throughout the animal kingdom. The lower we descend in the scale, the more do these latter

structures go to make up the encephalon; and, in the same correspondence, the more do the actions appear to spring from some instinctive, unintelligent source—the emotive principle of “self feeling,” most likely.

Vivisections practised upon the nervous centres are of no great value in determining function, excepting in so far as they corroborate an inference otherwise obtained. It was found by Dr. Budge that irritation of the corpora striata and corpora quadrigemina—these latter being immediately contiguous to the optic thalami—excited vivid peristaltic movements.* A like effect is a very ordinary result of sudden and intense emotion.

The evidences, also, of morbid anatomy, in inquiries of this nature, are but little conclusive. Andral's collection of instances in which there was found extravasation into the optic thalami, do not, however, exhibit any corresponding lesion of tactile sensibility, a result which might have been anticipated, with unusual frequency at least, if the structures had been the ganglia of common sensation. Perversions of the emotive sense, as distinguishable from external sensation, have had too little account taken of them for the existing records of morbid anatomy to be made available with reference to the hypothesis I have myself advanced.

In the autumn of last year I assisted at the *post mortem* examination of a case in which, during life, there had been unusual manifestation of emotional sensibility, without disturbance of the intellect. The right corpus striatum alone afforded signs of morbid change. Notes were taken at the time by my friend, Mr. Walsh, of this city, who had attended the patient; and from these I cite the following account. James Connor, aged 56, was a man of temperate habits, and one who, through life, had enjoyed good health and spirits, until within two years of his death. At this period, he became involved in pecuniary difficulties, and hereupon became low-spirited and somewhat unsocial. He continued to follow his business, however, as usual. Two months before his death, he embarked the remains of a small capital in some speculative undertaking, which issued in complete and immediate failure; a circumstance which very seriously aggravated his mental depression. A fortnight after this catastrophe he was seized with slight paralysis of one arm, which, however, disappeared spontaneously in about a week. It returned in a few days with increased severity, hemiplegia, indeed, shewing itself. The affection, to some extent, involved both sensation and

* London Medical Gazette, Vol. i. for 1839-40.

motion ; and there was, also, inability to articulate with any distinctness. "At this time," says Mr. Walsh, "I was sent for. I found his general health not bad. Though both motion and sensation were affected considerably, neither was abolished ; the tongue appeared to be the most affected, especially when efforts were made to converse. There was some impairment of vision, but the pupil showed no change. His intelligence was undisturbed, and but little enfeebled. *His emotional excitability was remarkable, the most trifling circumstance being sufficient to provoke it. When I visited him, he was literally overjoyed ; and, when I took my leave, he would grasp my hand and burst into tears.* At my last visit, twenty-six hours before his death, there was but little change in his general condition, except that he was weaker ; still he was able to be up and out of bed. When I left him on this occasion, the emotion displayed was truly distressing. He rested badly the ensuing night, moaning much at intervals ; next morning he became drowsy, and towards noon was slightly convulsed. He expired at 6 P.M., Nov. 18th, 1853. On examining the head, eighteen hours after death, the vessels of the scalp were empty ; the sub-cutaneous tissue was pallid ; the membranes of the brain were healthy, the vessels unloaded, and the sinuses empty ; the superior aspect of the cerebrum was natural, the convolutions a little flattened probably. On raising up the whole encephalon, a considerable quantity of serum slightly tinged with blood was found at the base. The consistence of the cerebral substance was good, and on slicing it very few *puncta vasculosa* were observable. Fluid, similar to that discovered at the base, occupied the ventricles also, and in considerable quantity. The choroid plexuses were not congested ; but, *over the right corpus striatum, there ramified several large vessels. On cutting into this structure, the grey colour was found deepened, and blood flowed from a number of points,* forming in these respects a striking contrast to its fellow on the opposite side, as indeed to all the rest of the encephalon. The cerebellum was quite natural."

The following communication with which I have been kindly favoured by Dr. Fripp, of London, comprises particulars of a case very analogous to the one just related :—
"A gentleman intimately known to me, one who possessed considerably more than ordinary powers of mind and attainments, and one whose strength of purpose and firmness were among his most distinguishing characteristics, was seized, without previous warning, with forgetfulness of words, in the midst of a very active career involving ceaseless occupa-

tion of mind and body. Perfect quietude and gentle medication very speedily succeeded in restoring this failure, and he appeared well again. But it was impossible to restrain his ardent desire for activity by the most explicit announcement of what this symptom in all probability indicated. In about two months, sudden and complete confusion of memory occurred, producing the strangest jumbling together of true and false that I remember ever to have witnessed. This was followed by partial paralysis of the left arm and facial muscles : and, at the same time, *great emotional excitability shewed itself*. It is worthy of remark that, apart from the affection of memory of recent events, which itself underwent considerable improvement, there was no impairment of intellect to be recognised. His conversation upon abstract topics and on whatever appealed chiefly to the reasoning powers was as clear and forcible as ever : and his quiet indomitableness of will shewed itself repeatedly in many characteristic ways. Yet he was at this very time, and whilst the memory was improving, *moved to tears—a thing quite strange to him—by the slightest occasion of feeling, even by a kind word, and the sight of a friend*. After some considerable apparent amendment, and on account of reapplication to various objects of former interest and occupation, which it surprises me now to think of as possible in such a condition, he suddenly became apoplectic, and died within ten months of the very first intimation of disease.

“ Besides evidence of some meningo-cephalitis on the surface, chiefly on the right side, the main result of the *post mortem* inspection was the disclosure of a large mass of dirty grey softened cerebral substance in the central part of the right hemisphere on a level with the corpus callosum, and principally over the posterior part of the corpus striatum. *This portion of the corpus striatum was itself softened, and as though corroded*, and liquefied matter filled the descending corner of the corresponding lateral ventricle. The thalamus was sound ; as also every other part of the encephalon appeared to be, after a most searching examination.

“ What struck me as a point of connexion between this case and your views of the function of different parts of the encephalon, was, I need hardly say, the prominent development during its progress of emotional excitability, and the damaged corpus striatum, with perfect integrity of the meso-cephale, apparent after death. But to enable you to judge more fairly how far this connexion deserves to be regarded as essential, I have briefly stated all the other leading particulars of the case.”

Certain nations are characterized more than others by emotional sensibility ; the Irish, for example, more than the Scotch. Women are, in this respect, more remarkable than men. It would be interesting to compare the relative development of the optic thalami and corpora striata in the respective instances.

Emotional sensibility produces its own reactions upon the muscular system, independently of the movements denominated consensual. A cheerful countenance, with a light elastic step, denotes a pleasurable feeling ; whilst a sorrowful, anxious look, with heavy tread and measured gait, indicates painful and depressed emotion.

In certain morbid states, emotional sensibility will react upon muscles that are paralysed to volition and sensory impressions. In laughter and weeping, facial paralysis becomes disguised, sometimes, for the moment.

Probably the most striking and conspicuous phenomenon, consensual as ordinarily occurring, is formed by the *ejaculatio seminis*. But I had, some years ago, a patient—a gentleman in good general health, and in the meridian of life—in whom there was impotence of erection and insensibility to the allied local impression ; yet, under the influence of emotion—in attempted *coitus*—the seminal effusion would take place.

Such facts, I conceive, corroborate the view which I have taken, that sensation and emotion have separate and distinct centres in the encephalon.

PHRENOLOGY FOR CHILDREN.—III.

MORAL GROUP *continued*.

BENEVOLENCE.

(a) Definition.—(b) Location.—(c) What influence does this faculty have?—(d) How do some of the other faculties influence Benevolence?—(e) When small how does the want of it show itself in the character of a child when other faculties are large and influential?—(f) When excessive or deficient how should parents act in order to restrain or encourage this faculty?

(a) The definition of this faculty is sympathy, kindness, generosity, desire to do good, and make others happy. All of you children learn very quickly who to appeal to for sympathy, and you readily imitate the generous actions of others. This faculty helps you to understand how much your happi-

ness depends upon some one else. Each one of you can add or take away from the enjoyment and pleasures of others in their every-day life.

(*b*) It is located in the fore part of the top head, in front of Veneration.

(*c*) The influence of this faculty is very considerable. Its mission in children is to do little acts of kindness. When not influenced by stronger lower faculties it takes delight in doing good from generous motives. Little girls do such a lot of things for their mothers from motives which seek no reward; they run errands, nurse them in their tender way when ill or weary, and comfort them in numberless ways. Elsie delights to make personal sacrifices, and to make others happy; she cannot bear to see any one suffer pain without relieving them in some way. George is evidently living more for others than for himself. Before going to school he chops the wood and draws the water for his widowed mother. It made Johnnie liberal-minded and full of generous impulses. He had the promise of a pony on a certain birthday, provided he saved a certain amount of his pocket-money up to that time. Just before the time expired his little brother fell and seriously injured his spine, so that he could not walk about. It was necessary that he should have a special chair on wheels, or hand-tricycle, so that he could get about independently. Johnnie did not love his brother very much, but debated in himself what he ought to do. He finally decided, with a great effort, to give up the idea of having his pony, and of offering his careful savings towards buying the chair for his brother, for he knew that his father could not afford to do both. He then went to his father and told him he would like him to take all his savings, and all he would have spent on a pony for him, and buy his brother a chair or hand-tricycle. His father was delighted with the generous spirit that prompted his son's words, and said: "It is very kind of you to give up what you have been looking forward to for so long. I will do as you like with the money; it will certainly give you pleasure to see your brother move about comfortably, and you can still look forward to having your pony in a little while." The father knew that the boy's uncle wanted to give him one of his ponies, but he thought it best not to say so just then. When the uncle heard what Johnnie wanted to do, he was pleased he had such a kind-hearted nephew, and said to himself, "I will reward him after a bit." So the hand-tricycle was bought for James, and Johnnie showed no disappointment that he had given up his pony. Three months after this, on his birthday, Johnnie received a note

from his uncle asking him to come over and see him during the day as he could not conveniently send his present. Well, children, picture to yourselves how surprised and happy Johnnie was to find he was to own a lovely pony. At night he went to his father and said: "I have never regretted giving up my desire on my brother's account, and now I feel doubly repaid for the sacrifice." He possessed large Benevolence. Agnes and Willie were the best scholars in their history-class, each worked hard to keep at the top. It so happened that Agnes had been at the top some time, when Willie became ill, and was obliged to stay in the house for several days. His annoyance at the thought of having to go to the bottom of the history-class made him worse. Agnes heard that he was ill, and determined to show him that she was not rejoicing in his illness; so she went and offered to read over the lesson (which was a very difficult one) several times with him. Willie was very much surprised at this unselfish offer. When the day arrived for the history-class to meet Willie was well enough to go, though he had missed every other one in the week. What was more, he knew his lesson perfectly, as Agnes had proved a great help and an able teacher. During the lesson a certain date was asked of the head of the class. Agnes stammered and hesitated, and failed to remember. Willie was asked; he answered correctly, but said: "I would rather not exchange places, because if it had not been for the help Agnes has given me I should not have known my lesson." The teacher was perplexed, for he knew how envious Willie was before to reach the top. Agnes, however, settled the matter by changing her place; whereupon the teacher said it was right, but advised Willie to do the same for Agnes if she were ill, and never to feel selfishly envious again, that Agnes had taught them a good lesson in disinterestedness, and made him desirous of cultivating the elements of Benevolence.

(*a*) With large domestic faculties, joined to Benevolence, is ready to make many personal sacrifices for the family; with large intellectual and thinking faculties, is always pondering over the ills of society, and promoting schemes for benefiting others and making them happy; with small Conscientiousness and Acquisitiveness, will give away everything without proper regard to the wants of self; with large Combativeness and Destructiveness are severe with those who oppress the poor, but are active in defending the oppressed and caring for their wants; with large Acquisitiveness and Cautiousness, and large Benevolence combined, will show great care and prudence in the laying out of money, will not

waste, but give away in all practical ways possible; with large Approbativeness, gives only to get the credit of being generous, so as to gain the praise of friends, but always lets the left hand know what the right hand gives; with small Approbativeness and Self-esteem cannot bear to let any one know what charitable work he has done, or what contribution he has given; with large Alimentiveness, Approbativeness, and Friendship, will give and spend liberally for good dinners for friends. When large, without Cautiousness and Acquisitiveness, a child will give away impulsively whatever he is asked for.

(*e*) When small in children there is little inclination to divide and share with mates and friends. With the selfish propensities strongly developed, and small Conscientiousness, are not mindful of others, not even their rights and dues; are too selfish and greedy, and need to cultivate the milder elements of benevolence, generosity, and sympathy. Jane and Edith are always quarrelling about who shall have the largest piece of everything, the best seat, the nicest book, but they never think of giving up willingly to each other. Children with it small are invariably hard-hearted, uncharitable, and unsympathetic; they care but little whether others are happy around them, but are occupied solely with selfish plans; they know none of the joys nor sorrows of sympathy, and make no personal sacrifices.

(*f*) An excess of this faculty leads a child to give away too readily and too impulsively; it leads to morbid generosity and sympathy, and must be controlled, and other faculties—such as Acquisitiveness, Cautiousness—brought more fully into exercise. If deficient it leads to so much meanness and uncharitableness as to be a decided weakness in the character; for such a child promotes no happiness in others, and receives none in return, and shows no interest in philanthropic works or home and foreign missions. If we had no strong development of this faculty there would be no society for the promulgation of Christian knowledge and moral teaching in foreign lands.

HOPE.

(*a*) Definition.—(*b*) Location.—(*c*) What is the function of this faculty?—(*d*) Do children exhibit this faculty?—(*e*) How do they show it in relation to the future?—(*f*) What does excessive Hope lead to?—(*g*) How do children show a want of Hope?—(*h*) How do other faculties act with this one?—(*i*) How must this faculty be restrained and cultivated?

(*a*) The definition of Hope is an anticipation of things to come, of success, of pleasure in store.

(b) This faculty is located on each side of the head, directly in front of Conscientiousness and behind Spirituality.

(c) The feature of this faculty in children is to help them to see the silver lining in every cloud. It enables them to see ahead, and realise their wants and desires beforehand. It causes them to plan out pleasures with reference to the future.

(d) Yes, children show a great deal of this faculty, and they help to scare away the anxieties and worries of older people by being light-hearted and merry.

(e) Children show Hope in regard to the future by always looking forward for surprises, and thinking of the time when they will be their own masters and mistresses. They are full of their schemes for succeeding in all their plans. It is well the veil is not lifted very early for them to see what disappointments they will have, and what extra exertions they will have to put forth, or their ardour would be greatly dampened, and their spirits be often crushed. It is beautiful to see their bright, beaming faces full of anticipations of the morrow. Hope gives an open countenance, and not only inclines us to look forward to present days as they pass but also inclines us to think of a future hope, when the spirit returns to God who gave it. This hope makes a child lay up treasures in heaven. It is called the anchor of the soul.

(f) Excessive Hope stimulates to a speculative turn of mind in children. It makes them blow their soap bubbles too large; it makes them expect things that are unreasonable and improbable. They are seldom, if ever, cast down by disappointments and failures, or present troubles and difficulties. Such children are always putting their thoughts into to-morrow, which is as certain to them as to-day.

(g) No; all children do not show this faculty. When small the want of it is soon perceptible by low spirits and melancholy ideas. They never feel enthusiastic about what they are doing; they never anticipate success at school or in business, but mainly think of every possible failure.

(h) With Approbativeness a child hopes for distinction, admiration, and praise; with Acquisitiveness large he hopes to become wealthy; with large intellectual faculties he hopes to rise in his profession; with Cautiousness large, and Hope small, he is over-timid, shy, and reserved. In every kind of work and in every station in life it is necessary to the happiness of all to possess this faculty. The mere anticipation of many hopes gives more happiness sometimes than the realisation; but there is great satisfaction even then.

(i) In order, children, to cultivate this faculty you must

seek the companionship of lively, joyful society; do everything, in fact, to cultivate buoyancy and sanguineness of mind. Your motto should be *nil desperandum*. To restrain Hope you must keep in check over-exuberant feelings of success; allow your judgment to guide you in all things; keep a guard on your desires to speculate and let your conscience lead your inclination to go ahead too fast on mere supposition.

We now close the moral, religious, or spiritual group, which occupies the highest place in the brain, as it exercises the highest influence over the other faculties. The mind becomes elevated and broadened through the moral sentiments, and little children learn to look up through them as through open windows to holy and heavenly things above. This group was wisely designed to guide and control the intellect, the reason, the passions, and selfish desires. We have a conscience to tell us when we are right or wrong; a reverence and worship for God and His holiness; a spirit of belief in things unseen; a sympathy for and desire to benefit others; and a strong hope to encourage and cheer. A balance of all is necessary to give harmony to the moral faculties.

HYPNOTISM.

OLD indictments alleged as an aggravation of the prisoner's guilt that he was instigated by the devil. If Mr. Frederick Myers be right, prisoners in future may defend themselves by saying that they were 'hypnotised' into crime. In the *Fortnightly Review* for this month he writes a paper which tends to demolish personality, disestablish free will, and throw a doubt on moral responsibility. He seems, we must say, as sorry as a man ought to be who is about to upset everything all round, and he excuses himself by saying that he is not responsible for the facts. Of course not, especially if nobody is responsible for anything. He tries to reassure himself and his readers by saying, "I believe that I have a true and permanent self;" but he adds, "if I have such a self I am certainly not conscious of him, and, whatever he may be, he is at any rate not what I take him for." Here we get rather mixed. Mr. Myers takes 'himself' to be something, but then he knows his view is wrong; so he does not 'take' it. All this springs from a careful study of hypnotism in France. It is a land of very fierce and ruthless scientific research; in the physical as in the moral domain there is nothing sacred

to a French physiologist; and to vivisection of the body they have added what they themselves call moral vivisection. They take susceptible and impressionable young people—generally girls—and, throwing them into a kind of trance, impose on them certain ideas, words, and actions. Dr. Liebeault made a lady fire at a gentleman with a revolver she thought was loaded, and another young lady fire at her mother. A dutiful nephew was compelled to give to his aunt a white powder which he believed to be arsenic—doing in his waking state what he was ordered to do in the trance. Another young lady was made to pick pockets, while imaginary interviews are suggested with the greatest ease. For instance, according to these French gentlemen, an absent husband has only to hypnotise his wife, and he can make her fancy him by her side at home when in fact he is at the Palais Royal with a friend. The hypnotisers, however, can do good. M. Liebeault suggested to one of his entranced patients, an inebriate, to give up tobacco and beer. The man has hitherto carried out the suggestion. A doctor addicted to drink was also impressed in the same way for six months; but, like the late Lord Derby, who preferred sherry and gout to claret without it, he regretted his lost delights, and after the influence had passed off would not come back to be hypnotised into sobriety again. The most amusing case is that of a depraved schoolboy. “An idle boy,” says Mr. Myers, “was taken to M. Liebeault, and it was suggested to him that he should henceforth be a model of diligence. The boy did actually work hard for some months by an impulsion which he could neither understand nor resist, and rose rapidly to the top of his class. But the suggestion wore off, and then he obstinately refused to be hypnotised again, having by no means relished his involuntary rôle.” That boy, it seems to us, was not altogether a fool.

On the eve of a general election this French philosopher, with his strange power over men’s and women’s wills, tastes, words, and actions, might be a useful ally to import. Turned loose in a Liberal constituency, he might make two-thirds of the electors inscribe Tory marks on their ballot papers. Mr. Myers himself, who is not as powerful an agent in this matter as Dr. Liebeault, compelled a young lady to paint some bricks blue when she ought to have coloured them red. From this to inducing electors to change their colours, and ‘vote yellow’ or ‘blue’ as Mr. Myers might wish, is only a step. We have not the honour of knowing what politics the writer of this essay professes, or whether his work for the

Society for Psychical Research engages all his attention; but we should advise the candidates for Cambridge to look after him very sharply towards the end of the month. If he could be detected in using undue mental influence, the return might be vitiated under the Corrupt Practices Act. A wider range of results, however, might be secured if we could make all good men hypnotisers, and all bad people susceptible to their power. We should not then require any Local Option Bill. A hypnotiser or two stationed in each county would suffice to sober down the whole posse comitatus of toppers. Long ago the favourite panacea of English Protestants for Irish crime was a short Act making each priest responsible for the murders in his parish. Under the régime suggested by this article the local hypnotiser would be held accountable for everything done by his subjects; if they went wrong he, not they, must be doomed to penal servitude, or in extreme cases 'accurately well hanged.' It is claimed for these experiments that they "have a practical value, as showing that in the case of a person charged with some odd and motiveless offence it is worth while to find out by experiment whether the act may not have been performed in a somnambulic state. In two cases already persons thus accused have been hypnotised on a physician's suggestion, and it has been proved to the satisfaction of the Judge that they were irresponsible for the acts ascribed to them, which had been performed without waking intention in a somnambulic trance." This kind of exculpation is as old as Bellini's famous opera, in which Amina's innocence is so melodiously established. We should like, however, to see a case of the kind tried before an English jury. We all know how wonderfully ready Frenchmen are to acquit interesting criminals, or to find out extenuating circumstances. If, in addition to all the oratorical sentiment which French counsel drag in with such effect, they can now call in hypnotisation and somnambulism, the difficulty will be to convict any one in France of any crime. If it be true that there are men so dominant in will, and others so weak, that the latter will obey all the suggestions of the former—as these French doctors assert—then the experiments seem to us exceedingly dangerous—worse, even, in some respects, than vivisection is represented to be by its opponents. Habitually to subdue the mind, the will, and the moral faculty of another person is as ruthless as the physical process by which some enthusiastic experimenter destroys one by one the nervous system of the brutes beneath his knife. In the world as it is there is already too much of the subjection of the weak to the strong, of the

feeble and well-meaning to the resolute and wicked. We do not need to organise and systematise what is already around us in an irregular and unfashioned way, and we gravely doubt the morality of hypnotic experiments carried on by men of science on weak and impressionable people. Mr. Myers says that the French subjects were "the picked specimens of a sensitive nation, and that, among thousands of English men and women, perhaps not one case of similar susceptibility would be found." We hope not, and we should deprecate extended experiments. Human personality is not a toy for men of science to play with, nor is hysterical impressionability something that ought to be developed in any patient, however humble or however willing to be impressed.

It will be seen that, to a certain extent, latter-day hypnotism is mesmerism revived under a new name. The physical effects of the older treatment were illustrated over and over again, some years ago, in private life and also in a public hospital. Cures of nervous and in some cases of other diseases were reported on what seemed excellent testimony, and in Calcutta severe operations were performed under the anæsthetic effects of mesmeric passes. Yet, strange to say, this initial success has not led to the permanent inclusion of the system amongst established remedies. There was a time when orthodox doctors classed homœopathy and mesmerism together; but the one still flourishes, and finds adherents even in high places—Lord Beaconsfield's physician was a homœopathist—while the other has died down. There are, we believe, still some mesmerists in London who are called in occasionally by patients tired of doctors and of drugs, and who, either through the imagination of the sufferers or in some other way, do occasionally cure, or at least appear to cure for a time, undefined ailments. Compared, however, with the glowing hopes held out by Elliotson and his friends, this is a poor result. There is no mesmeric hospital, no trained staff of mesmerisers, no periodical advocating the cause. The fashion seems to have passed away. We find it difficult to account for these tides in the affairs of physiology. It is not only on the outskirts of the science that we have flow and ebb, a rush forward, and then a reaction. Remedies which were all in all fifty years ago are now never used. Alcohol has been decried, applauded, and denounced again two or three times in the last half-century. Heroic treatment of certain diseases comes in and goes out like changes in the style of men's hats. For a few years a certain drug will be given profusely; in ten years a doubt as to its

efficacy is whispered in the hospitals, and makes itself felt by bedsides. A short time ago it was dangerous for a doctor not to believe in 'germs,' while Pasteur and Koch insinuated their impression that they could guard all men from all diseases by universal inoculation. Now that the 'comma bacillus' has been disestablished, and that Pasteur finds men to question his conclusions, the lay world is thrown back again in its usual helpless condition 'when doctors disagree.' One explanation and apology is often given by the profession—'the type of disease changes.' But why? Why should our forefathers have had ills that yielded to certain medicines, while our ailments, called by the same name, require distinct treatment and different drugs? If this query seems to suggest dark doubts, there are two considerations that carry consolation. Preventive medicine has made magnificent advances. Doctors rely more on temperance, exercise, and fresh air, and in the region of sanitary science they have done much to render our streets and homes healthy. In addition, operative surgery, aided by anæsthetics and antiseptics, has made greater progress in the last fifty years than in the five hundred preceding. These are clear gains. As to mesmerism and hypnotism, the underlying truth no doubt is that there are susceptible persons who can be influenced mentally and bodily by men of strong will and special physique, but that such patients and such operators are one in a hundred thousand—perhaps rarer still. The rest must continue to rely—more is the pity—on doctors and on drugs.

Daily Telegraph.

UTILITY OF PHRENOLOGY.

"PHRENOLOGY is the science of the mind." This has been proved by many great and learned men who have made it the sole study of their lives. The term phrenology is derived from two Greek words—*phren*, mind, and *logos*, discourse. This science treats of the faculties of the human mind, and of the organs by means of which they are manifested; the subject therefore must be both interesting and important. The Bible recognises all the faculties of the human mind, showing us the utility of using them aright, and warning us against their misuse; which shows us the adaptation of revelation to the human mind. Phrenology may certainly be opposed as a new doctrine; but the same objection might have been urged against all previous valuable discoveries of a scientific and philosophical nature. It is not long since the power and usefulness of steam was discovered, yet who will

despise its mighty agency because newly made manifest, and because our forefathers were strangers to its valuable properties? The pursuit of everyone should be after truth, whether it is to be found in ancient or modern costume. Phrenology is as ancient as the mind of man, though the knowledge of its true principles must be admitted to be only of recent date. Phrenology upholds the religion of Christianity, and is strongly opposed to atheism; for phrenology is built on nature, and all nature proclaims a God; so does phrenology. Man possesses two faculties—Spirituality and Veneration—which are witnesses in themselves that there is a God; and by aid of the two reasoning faculties—Causality and Comparison—he is guided aright to the true God and the worship thereof. And it will tend to his profit now, and happiness hereafter, thus to believe phrenology recognises the immortality of the mind, showing the mind to be quite apart from the brain, as a musician is of the instrument upon which he plays, the brain being not the mind but the organ of the mind. Thus the mind uses the brain as an instrument by which thought is manifested. Also the evidence of the immortality of the mind is strong, showing that the strength of the mind is increased when physical vitality is at its lowest ebb, from which we may infer the continued life of the mind when separated from the body, and such is the activity of the mind when this separation is about to take place that a whole lifetime, things long forgotten, are clearly remembered and understood.

Phrenology has exploded and overturned all previous systems of mental philosophy—some of which were considered almost infallible—and strikes at the root of all those metaphysical systems relating to the human mind which have been incomprehensible to nine-tenths of mankind at large. Dr. Guy says: “Phrenology is the simplest and by far the most practical theory of the human mind.” Mr. Robert Chambers, who has done so much good by the publication of educational literature, says: “By this science the faculties of the mind have been for the first time traced.” The Rev. Dr. Walsh, in the University of Edinburgh, said: “The moment we satisfied ourselves in regard of the evidence on which the science rests we saw that phrenology would be immortal, and we felt it opening up to our minds new views in regard to the condition of our nature and destiny of our race.” Henry Ward Beecher, the great American preacher, says, in his lectures on preaching: “I do not know anything that can compare in facility of usability with phrenology; nothing can give you the analysis of the mind as that can”;

and further on he says : "For twenty years it has been the foundation on which I have worked." He concludes his observations by saying : "It is one of the tendencies in the right direction, and when the knowledge of the human mind shall finally be made clear, I think it will be found that much is owing to phrenology." Here we have the utility of phrenology fully acknowledged by men who are competent to express an opinion.

Phrenology has been the subject of ridicule and contempt both among the illiterate and the learned, and many minds—some of first-rate order—have been vigorously employed to make it appear altogether foolish, and, if possible, to annihilate it ; but we do not fear, for it has been the same of every system that was ever introduced to benefit man, and to be a blessing to the world. This opposition, however, has had one good result, viz., that of inquiry ; and of all disputed topics, none can profit more by it than phrenology. The rapidity of its progress during the last few years is a striking confirmation of this sentiment. If we may judge from what has already taken place, it is probable that at no distant period phrenology will supersede every other system of mental philosophy. In whatever way this science is viewed its tendency is excellent, its principles are plain, its proofs numerous, its advocates many, and its advantages great.

We will now speak for a short time on its principles and advantages. Firstly, the outward formation of the head denotes the capabilities possessed for mental manifestation, as the bones of the head are moulded to the brain, and the peculiar shape of the bones of the head are determined by the original peculiarity in the shape of the brain. Thus it is from observation and comparison that the phrenologists' statements are made. From observation we find that size denotes strength, other things being equal ; for instance, two branches on the same tree, both equally healthy, the largest being the strongest. Nature operates always by means of organs or functions ; thus, whenever Nature would put forth power of function, she does so by means of power in the organ which puts it forth. This correspondence between organic conditions and functions is fixed and necessary, and governs every organ and function throughout life and nature. Hereditary organic quality is the first and all-potent condition of all power of function and happiness, and is imparted by the parentage along with life itself. It is infinitely greater than education or surrounding circumstances. Health consists in the vigorous exercise of all the physical functions, and disease in their abnormal action ; and in order to acquire

cerebral vigour the bodily functions should be equally vigorous. Phrenologists have localised forty-two faculties of the mind in various portions of the head, and that they are in their right places can be easily proved by going to a competent phrenologist, a stranger, giving him no information whatsoever, and he will tell you the various traits of your character, with faults, failings, and special abilities, &c. These faculties are, in their turn, governed by the temperaments or certain states of constitution, which are found to have a great effect on the energy and activity of the brain and system in general. The advantages of phrenology are very numerous, and will be found of great utility to lawyers, jurymen, magistrates, and judges; also to detectives, and all those engaged in the welfare of the nation and the detection of crime. Medical men, especially those belonging to lunatic asylums, will find the greatest of benefit from the study of phrenology; for were their patients treated phrenologically, according to their organization, how much greater would be their success with them, and the cures more effectual. Mental derangement is often caused by one or two organs of the brain being too large or diseased, as the organ of Friendship; then the mind will be taken up with strong desires for friends, or deep sorrow at the loss of them. The same rule will apply to the organ of Philoprogenitiveness or Parental Love; or it may be caused by an excess in the organ of Cautiousness, and a great deficiency in its counteracting organ, viz., that of Hope. Therefore the best treatment for these and other similar cases is to allay the over-stimulating organs and to excite the organs of opposite tendency according to the phrenological instructions. Sir William Ellis, M.D. (late physician to the great lunatic asylum for Middlesex) says: "I candidly confess that until I became acquainted with phrenology I had no solid foundation upon which I could base my treatment for the cure of insanity." And Dr. W. A. F. Brown, one of Her Majesty's Commissioners for Lunacy in Scotland, says: that in consequence of his previous knowledge of phrenology he was able to derive great additional information during his studies; and he ascribes the success which attended his treatment at the large institutions in Scotland, which were under his charge, to his phrenological acquirements. Here again we have the utility of phrenology acknowledged. Head authorities of banks, post offices, and all positions where trust is required, would do well to study phrenology, as it would aid them greatly in the selection of their employés, thus indirectly shielding many from temptations which if yielded to

might prove their ruin. Mistresses also would find it very useful in selecting their servants; a full development of Order and Conscientiousness is essential to a good domestic. Veneration also, which bestows deference to superiors, should be well developed; and where children are to be taken care of Philoprogenitiveness ought to be large, otherwise little interest will be felt in them. Parents will find the study of phrenology of much service, also a source of great pleasure; it will aid mothers in the development of their children's minds, showing them which faculties to restrain and which to cultivate, so as to bring to perfection every faculty, and hence a harmonious mind. Phrenology bears upon the education of man, first, by indicating what powers are strongest in any individual, and therefore most worthy of being cultivated; and, secondly, by showing the order in which the powers are developed, and consequently the order in which the powers of the mind ought to be trained. Therefore, if teachers were better acquainted with phrenology and its laws, and taught their pupils according to their phrenological organization and abilities, how much better would it be both for themselves and pupils; how much disappointment might be spared, with less failures. Young men and youths, before starting in business, would find it of great service to consult a phrenologist, who would at once tell them what occupation or profession they would be most successful at. Many and grievous are the mistakes made in choosing an occupation; hence work becomes distasteful, (which should be a pleasure), and life a failure. Men are made lawyers who should have been preachers, and doctors who should have been lawyers, and school-teachers who would have done better as artists, architects, &c. By consulting phrenology all these mistakes may be prevented. Work, from the very first start in life, instead of being a toil will be in harmony with the organization, whether of head or hands, and will become a source of pleasure and happiness. Then, again, by consulting phrenology young men starting in life will obtain a chart of their own minds, their hopes and fears, faults and failings, with special abilities, showing which faculties to restrain and which to cultivate, and what dangers to avoid and how to do it. Sometimes even one faculty being too small and not cultivated may lead to a life's failure, as the organ of Hope or Firmness; or it may be an organ which is too large and not restrained, as the faculty of Cautiousness, which is continually magnifying dangers. A person with this faculty large is very fearful, timid, and though perhaps of very good abilities, yet, because of small

or imaginary difficulties, or for fear of failure, he is afraid to venture, even in ordinary undertakings. Thus this fear paralyses his intellect, the result being that he is looked down upon and passed by by many who are his inferiors in intellectual attainments. Therefore it is of the utmost importance to restrain this faculty when too large; for, unless you master it, it will master you, thus making your life a failure. Very good advice for restraining this and other faculties which are too large, and the cultivation of those which are too small, will be found in the "New Illustrated Self-Instructor in Phrenology and Physiology," by L. N. Fowler. Every one should get a copy; for, besides phrenology, it contains much valuable information in physiology, and will be a good and useful study before forming confidential and friendly compacts, and will not be neglected by the intelligent lover, for it treats on who ought and who ought not to marry, and who will and who will not make good husbands or wives, and what organizations will harmonize best together so as to make good and happy lives. Phrenology will also be found useful to society in the prevention of crime, and will have a good influence upon legislation by imparting correct ideas of human mind.

In conclusion I would say, to one and all, who have not yet made phrenology their study: know thyself, thy mind, which is immortal, and all thy powers. It will tend to thy comfort, happiness, and prosperity so to do; also to a harmonious state of mind and feelings, both individually and as a nation.

CHARLOTTE LOWRIES.

THE BEARD—A WOMAN'S VIEW.

A LADY, writing in the *Evangelist*, asks: "Were not the conquering races always the bearded ones? How can any sane person imagine that our Maker caused beard to grow upon the face of man for the sake of the employment of cutting it off, or digging it out by the roots, as some savages do? And remember, that among God's chosen people a man was considered unfit to enter good society without his beard. He must 'tarry at Jericho' till his 'beard was grown.' I wish he had to tarry there now until that time. A man without a beard looks like a house without blinds, a horse without a mane, or any other incomplete affair. And it is perilously near to reproaching his Maker for man to keep himself shaved smooth. In fact, the laws of Nature, which are the laws of God, resent and avenge the custom. Many a life has been lost thereby. And it is not uncommon for throat and

eye disease to punish the man who shaves, not to mention the tears and wry faces he knows, in consequence of resisting beard or dull razor. Only consider all that a man will go through in order to deprive himself of protection and his greatest dignity and beauty—as not unfrequently a full, well-cared-for beard is. My husband never shaves. He never did shave. And permit me to tell you that the man who never shaves has a soft beard, silky as the hair of the head, and instead of growing down over the mouth, as the beard does after being cut till it becomes as stiff as a broom, it inclines to right and left, leaving a white strip between the lip and the moustache, so that the latter will not go swimming every time the man drinks. I knew a gentleman who had a fine beard. His wife hated it. As he would not shave she cut off one side of it while he slept. Of course, then, he was obliged to shave all off. Soon after he fell in a dead faint or fit of some kind. The doctor, when called, said to him, ‘Why have you shaved? It is not well for you.’ Then the truth came out. ‘Madame,’ said the doctor, sternly, ‘you must choose between a husband with a beard or no husband.’ That man wore his beard in full flow ever after, and his wife did not quarrel with it again. Akin to shaving—a barbarism which should be hunted from the world—is the custom of shaving the head so close that the scalp shines through. This terrible, hideous custom came in with the war, for wise sanitary reasons under those circumstances; but is now without need and without excuse. It is injurious as well as disfiguring. The hair is a conductor of electricity to the brain, and it should never be less than two inches in length. Unless the facts in the case are taught in the schools, so that boys are warned, in a few generations more we shall have a general softening of the brain among our masculine population. There is more than one sign now of the near danger. Give us back the beard, the majestic, flowing beard, and spare us the hairless head until age renders it natural and reverend.

THE OLD CORNER SHOP.

A STORY OF VERY POOR HUMANITY.

BY A NEW WRITER.

CHAPTER II.

THE CUSTOMERS OF THE CALIPH’S HEAD.

Among the first of our evening visitors, when the shop looked brilliant under the combined illumination of a dozen candles, which

it took Raffael's whole time to keep snuffed, were Uncle and Aunt Smoothdrop. Smoothdrop was a tall, portly man, with a smooth-shaven face and a bald head. He had a loud voice and a facetious manner, as became a local preacher and a prominent man in his 'body,' as he was. He had promised to come and make some purchases the day of opening, presumably as a set off against his refusal to keep his promise about the loan.

So coming in with his dumpy little wife on his arm, he pushed his hat back upon his head, and cried out: "How are you, Sturdy? Sturdy as ever, eh? Hope you are well, Jane! How do you do, children? Still lengthening out, Raff; they'll have to reel you up if you get much longer."

Thus he rattled on; then turning to father he said: "You see we have kept our promise; you will never find us fail in our promises; but when folks come such a long way they expect a bargain, don't they, Mary?"

"Of course," whispered the dumpy little wife, who was asthmatical.

"You will find our things very good, and they are as cheap as you can get them," said father.

"That's as it should be; but I shall expect ten per cent. at least for cash," replied uncle.

"We shall be able to manage that, seeing that you are so poor," said mother, with a little laugh that had a snap of satire in it.

"Well, and how are things looking so far," said Smoothdrop, after concluding his purchases, over which he haggled consumedly, and beat his relatives down until we actually lost in the transaction. "What sort of customers have you had?"

Father said we had nothing to complain of.

"I've no doubt you'll do very well when you've got a little more into the ins and outs of the trade," said Smoothdrop, smoothing down his scanty locks; "but you have a good deal to learn yet. A shopman, for instance, doesn't serve with his coat on, and he puts on an apron."

"Oh, John is not going to serve," mother replied, rather sharply; "he will have his teaching to attend to."

"And I hope he will never stoop to wear an apron," put in Murietta, who had a great idea of father's importance.

"Ah, Miss Prideful, one must get rid of those notions when one comes to keep shop; I wore an apron and thought it no shame when I was a young man," said uncle, swelling himself out a little.

Meanwhile father had slid out of the shop, and now returned in his shirt-sleeves and with an apron on. Mother and Murietta looked aghast; but uncle exclaimed: "That's more like it now!" And a customer just then coming in, father proceeded to cut up and weigh some cheese and bacon in as workman-like a style as he could command; which is not saying a great deal, for at such things he was about as clumsy as you could find one.

Presently uncle and aunt departed; they had scarcely left the shop ere another relative, Widow Draper, arrived.

"Lawks a me!" she cried on seeing father, "whativer makes you put yourself in that guise?"

"I'm told it's the proper thing," said father.

"Yes, for the low shops," she replied; "but you are going to be a cut above them, I hope."

Father needed no more, but presently slipped out and had his coat on again in a trice, although still retaining his apron.

A little later Abraham Luck and his wife came in. Uncle Abe had married father's sister, but she had died and he had married again. He was a baker, and a good-hearted, generous man, but he had a large family, and his wife was a wretched housekeeper, so that they always lived from hand to mouth. He bought a lot of things, and paid for them 'on the nail,' as he put it, without a question as to price or discount. He also wanted us children to accept some change. Then, when father's back was turned, he said to mother: "Jane, I wouldn't let John wear an apron if I were you; it doesn't become him, man of genius and artist as he is."

"We're told it's the proper thing," said mother.

"Proper thing be bothered!" cried Uncle Abe, hotly. "It's the proper thing for the likes o' me and Smoothdrop maybe, who have been bred to it; but Sturdy's been brought up to be a gentleman, and is one, if he isn't rich; and he shouldn't demean himself by putting on an apron. What 'u'd his artist pupils think to see him in that rig?"

"There now! Just hear what Luck has to say," exclaimed mother, when father returned into the shop.

"An' that's what I think," said Uncle Abe, when his opinion had been repeated.

"Well, I can't say that I have any partiality to the thing," said father, "and I'll even take it off to please you; but seeing that we've taken to shopkeeping I want to do just what a shopkeeper should."

The words were scarcely out of father's mouth ere another customer entered; one who, as Phil used to say, always made us 'sit up.' Mrs. Ramsbottom was the *bête noir* of us children. She was a good and excellent woman in her way, but for all that I fear we hated her; which shows that goodness is not always amiable—at least to children. But she had never had any children herself, and that may account for her lack of sympathy with young people and their ways.

We knew Mrs. Ramsbottom through being connected with the Pure Scripture Christians, of which she and her husband were the leading spirits. Mr. Ramsbottom always gave out the hymns and started the tunes and did the chief 'expounding,' as it was called. The Scripture Christians did not believe in preaching; though what was the difference between expounding and preaching I never could understand, except it were that the former was the longer and more tedious. Mr. Ramsbottom was practically the head of the community; for which reason Phil nicknamed him the 'Pope'; and for the reason that Mrs. R. ruled him he called her the 'Popess,' much

to the disgust of Raffael, who was a great stickler for correct derivations.

Mr. Ramsbottom was a pleasant, venerable looking man, and most amiable in his manners; but he was a very keen business man, as father knew to his cost. He was a picture-dealer, or, as he called himself, 'an art connoisseur'; and besides cleaning and touching up his old paintings, father from time to time put some of his water-colours with him for sale; but, as he used to say, it never paid him, because he seldom got back more than the price of the bare materials used in them. We knew for a fact that one picture for which Mr. Ramsbottom paid father ten shillings he sold for five pounds, which, of course, at the time, made us very indignant. But in spite of his sharpness in business we could not help liking Mr. Ramsbottom; and I think we liked him the more because he was undoubtedly henpecked, and because he submitted to the infliction with such a chivalrous grace, as became the husband of the niece of a baronet; for Mrs. R. was a daughter of the brother of Sir Tyke Winchap, of Winchap Hall, under whose mahogany Mr. Ramsbottom placed his legs regularly once a year, and silently worshipped the head of the table.

The old lady purchased a few commodities, which she handed to her maid to carry; then having carefully tied up her purse and stowed it away under a multitude of petticoats, each of which she gathered up separately, as though to display the wealth of her garmenture, she began catechising Murietta on her domestic accomplishments. Could she do plain sewing, knitting, darning, quilting, etc. "Yes, and tatting too," said Mury.

"A girl in your position should not waste her time in such frivolities," replied Mrs. Ramsbottom. "If I'd been you now, I should before this have made my father an apron to put on in the shop; it looks so much more becoming."

"I have just been told that an apron does not become me, and have thrown it off," father answered.

"Oh, I would not mind the advice of everybody that take upon themselves to offer it," replied Mrs. Ramsbottom.

Father said he would not in the future, and cast a sly look at Uncle Abe; and he certainly never put on an apron again.

The Popess then turned again to Murietta, and advised mother to put her to service, a piece of advice which mother took with becoming deference. Mury, however, frowned her brows, and made Sir Tyke Winchap's niece a profound courtesy behind her back. None of us children, I fear, displayed the Christian spirit and humility of our parents, except it were Raffael, who was in these years rather slow and calf-like. In spite of his length, and the hirsute promise of his upper lip, no one would have taken him to be eighteen. Phil had twice, nay, four times his spirit, although only half his size and four years his junior. Indeed, I think it is true what Phil used to say, that what Nature stints in stature she makes up for in spirit: when she withholds strength she gives a sting. It

was certainly so in his case. Phil certainly never could be put upon as Raff was; nor would he let us girls be put upon. He was a veritable little champion, albeit so small of stature till his seventeenth year that people used to wonder at him.

For a few days the shop seemed to be doing well. There were plenty of customers, and though some of them were credit ones, that, father and mother argued, was to be expected. Uncle Smooth-drop had advised that we should not on any account give credit, and father adopted the advice to this extent: he gave no credit when he could help it. But we soon found that the credit customers were steadily increasing, while the ready-money ones were as steadily falling off. The reason was not far to seek. It cannot be denied that father had been horribly taken in by most of the tradesmen with whom he had dealt; and our cash customers, finding they could get better things elsewhere for the same money, went elsewhere. The poor cannot afford to be so independent; they are obliged to take what the shopkeeper who allows them credit has to give them; and if they pay dearer for what they get than they would have to pay elsewhere, there is no help. That is one of the penalties of poverty, and one of its worst penalties too. If I were one of those who calmly fold their hands and attribute all our ills and misfortunes to the inscrutable ways of Providence, I should not only say that Providence was inscrutable, but exceedingly mean in its ways; but I am not one of those who so complain.

It is undoubtedly true that our customers had to put up with some insufferably bad stuff. Our flour was fusty, our bacon was reasty, our cheese mouldy, our tea—well, Phil nicknamed it sloe-chong, and I don't think much of it had been nearer to China than the next common. But if our customers were served with a lot of indifferent provand, they took their revenge by paying for it indifferently, or not at all. Some, I must say, could have paid that did not; but the majority of our poor customers I believe honestly intended to pay their debts—when they could, though many of them had a sort of stepfatherly way of looking upon their obligations. There was, however, a large number who fell into debt through sheer inability to pay their way, and whom it grieved as much not to be able to pay as we were grieved not to receive. It was not always easy to find out who were the willing and who the unwilling ones, and once father was induced to commence proceedings against several defaulting families; but having taken the first step he quickly drew back, and never afterwards did he unduly press people for payment. He said it was unchristian work; but then father was so very tender.

One of the families whom he decided to press for payment was that of a workman who was said to be able to earn good wages. After sending once or twice father called himself. He found a decent little woman with six little children about her, with no food to eat in the house, and no means of getting any, our supply having been stopped. A month ago her husband had gone away to a distant town in the

hope of getting work, and she had not heard a word of him since. He was a delicate man, and she feared he had fallen ill—and among strangers too! The thought of the poor man's possibly dangerous plight seemed to be her worst trial. Father came home in a great way, and asked mother to at once send the poor body some bread. Mother put a loaf in a basket, and bade Phil and me take it. Father looked in the basket as we were going out, and seeing that there was nothing but the loaf, said to mother,

“Jane, you might have put a bit of butter with it.”

Mother said there was very little left, adding—though without any trace of harshness—that she thought if they were really in want the dry bread would go down well enough alone. Father put his hand on mother's shoulder, and said something I did not catch; whereupon mother cut a lump of butter and put it in the basket, along with a small jar of treacle for the children. I shall never forget that poor woman's look of gratitude when we handed her the contents of the basket. She instantly gave each of the children a great hunk of bread and treacle, and laughed and cried to see how eagerly they devoured it. Phil and I cried too, although Phil tried to make it out he did not. It was not the last time a basket went back and forth between our house and Mrs. Tuddy's

That was the way we advanced to fortune at the Caliph's Head.

Matters speedily went from bad to worse. For some reason or other that we never knew father's pupils dropped off one by one, until there was only one left. Then the wholesale tradesmen to whom we owed money refused to give any more credit; even those who sold bad stuff declined to part with their wares without money down, and indeed became the most clamorous for payment. Things began to look very black—all the blacker because a severe winter had set in. Often we were very hard pinched. Father worked harder than ever, and mother prayed harder. I, who was a little mite of a thing and went about as noiselessly as a butterfly, used to surprise her on her knees and run away frightened. I had been told so often that God was present when we prayed, that I always expected to see Him behind the door or somewhere, something like Mr. Ramsbottom, only bigger, and dressed like him in a military cloak, with a silver buckle; for winter and summer that was Mr. R.'s rig-out.

To make matters worse Mr. Grabbit was pressing father, whose payments were in arrear, and threatening to ‘court him’—a very different thing, by the way, to the ‘courting’ ladies know and like so well. We were enabled to satisfy him for a time with a five-pound note borrowed from Uncle Abe, the only one, I believe, the generous fellow possessed.

That time is still like a nightmare to me. I saw father working night and day at pictures for which he was content to get a few shillings in order to keep the wolf and Grabbit from the door; he looked sad and careworn, and we noted that in a few months his hair turned almost white; but, for all his troubles, he never had a

cross word for us children or for mother. He would tell us tales and draw us funny figures on cards to make us laugh when we were hungry and there was no bread in the house.

I was too young to understand everything at that time ; but I well remember how I used to laugh and cry with the others over the events—humorous or pathetic—of the day.

Once, I recollect, when we were gathered at night round the fire, sitting close to keep each other warm, coal being scarce, mother told us she had a great sin to confess. The landlord had called for the third time for the rent, and she became so cowardly on seeing him approach the door that she ran into the shed in the garden, and begged Bridget, the washerwoman, who happened to be in the house, to tell him she was out. “It is the first falsehood I ever told,” said mother, wiping away her tears, “and I hope God will forgive me ; but I felt that I must first humble myself before you all and ask your forgiveness before I could ask His.”

We had not all got handkerchiefs, and so mother’s was very wet before it came down to me, the youngest. Father did not need it because he went down on his knees to make the fire send out a ‘lily-low,’ which we children loved so much to see, especially when there were no candles.

Then, to brighten us up after one of the saddening episodes, father would tell us something comical that he had observed in his travels during the day ; for he went about a great deal with a portfolio under his arm, and his heart in his throat, trying to sell his sketches or to find work. Both he and mother had a very keen sense of the ludicrous, and used to make us laugh by the way they described things. It would have made any one laugh till they cried to hear her tell how one day Annie Ray came in for a pound of moist sugar when there was not an ounce in the shop ; and in order not to disoblige a good customer, but more for the sake of hiding the barrenness of the land, she privily gave Raff the last pence she had and sent him out the back way to the grocer in the next street to fetch some, pretending to send him upstairs to an imaginary storeroom ; meanwhile occupying the child’s attention with goodies and talk till he returned. Brother was rather long, and when he came in breathless, mother, wishing to keep up the fiction, said : “I suppose you could not get at the bin that you were so long ;” to which Raffael replied : “I should have been quicker, mother, but the boys waited for me outside Mrs. Briggs’s to snowball me,” and so let the cat out of the bag.

But you never could teach Raff a trick, even one of the simplest kind. Phil would have done very differently, and he teased Raff unmercifully for his want of spriness. But we very shortly had the laugh on him. He had left school some time ago, and was very anxious to go to work in order to augment the family income ; but what to be he did not know. Indeed it was a question between would and could ; another direction in which poverty has to wait on Providence. On one point, however, Phil was always very decided :

he would not be a teacher. Raffael had been at the profession for a year or two; although he did not make much headway. He would be at a school for a few weeks or months, everything, apparently, going on all right, when suddenly he would have warning to leave, generally without the slightest reason given. Mother said he was too gentle (we girls called it 'softness'); Phil averred he had no gumption; but father always said: "Never mind, Raffael will find his nugget yet," or something equally oracular. However, it happened that a friend of Raffael's, Mr. Thompson, who was a teacher in a private academy, called one day, and said that a pupil-teacher was wanted in the same school, and proposed that Phil should try to get the place. Phil declined; he would rather be a scavenger, he said.

"That's all very well," said Mr. Thompson, who was Irish on his mother's side, and consequently possessed a lot of Hibernian mother wit—"that's all very well, and if there was a place open for you as a scavenger, I don't know but I should advise you to take it—without any offence, by the way—for it's little better than scavenging work to get the cobwebs out of some lads' brains and to get anything like sense in. But there the place is, and you can have it for the asking. My principle has always been to take the first thing that offers rather than do nothing. It occupies your time—that's something; it keeps you out of mischief, which is more; it gives you a few shillings for your pocket, and that no man should despise; and over and above all, you can be on the look out for something just as well in a place as idling about."

This reasoning convinced Phil, and the next day, rigged out in his best, he accompanied Mr. Thompson to see his principal. The academy was in one of the suburbs, and to save time they got into an omnibus. When they came to the street the school was in Mr. Thompson suddenly rose and told the conductor to stop; but before he had time to do so he jumped out. Seeing Phil on the step, and about to follow his example, he bade him wait till the 'bus stopped; but too late; Phil jumped, and being short-legged and unused to such gymnastics, he fell and rolled over in the liquid mud. Such a pickle he was in! Mr. Thompson laughed, the conductor laughed, the spectators laughed, and, vexed as he was, Phil laughed too. He was for returning home at once; but Mr. Thompson would not hear of it. "Come along," he said, "and I will scrape you," and laughed again.

They got into the house back way, gained the kitchen, and Mr. Thompson, with the assistance of the scullery maid, began the operation of scraping. While they were so engaged the principal entered, to whom Phil was formally presented, and of course he had, sorely against the grain, to join in the laugh once more. Phil always swore that his friend privily gave the principal a hint, in order that he might enjoy the joke. Although Mr. Thompson denied the impeachment, I used to think it not unlikely that he did, for he loved a joke above everything, and once said if he thought the

angels could not enjoy a comedy he would not wish to go to heaven.

That was the first and last of Phil's school-teaching experience. He worked at the academy for a week, toppled a big lad over for getting behind him and imitating the strut of a Bantam cock, and then went to the master and told him he was not fitted for a teacher, and so left.

That day was the more impressed upon my mind because another event happened that caused us much amusement at the time, and led to strange things afterwards. I should say that we had two good friends that never deserted us in our worst trials. One was a sausage-maker and the other a sweet-stuff manufacturer. The latter was a funny little man, who wore a very large, old-fashioned beaver hat, clapt on the back of his head, and a thick muffler about his neck. Winter or summer he was never without that muffler. For the rest he wore a jacket like a boy's, patched trousers that exhibited a great deal of ancle, and heavy-clouted shoes. He was the perfectest little fright that was ever seen ; but a gem of a man for all that. Whether paid or not, he always kept us well supplied with sweets ; and if mother protested that she did not know whether she should ever be able to pay him, he would reply with a "Chut ! chut ! You will pay me some day ; if not, what matters ?" His name was Corvisant (the descendant of a French refugee we were told), and he carried his wares about in a flaming-red box mounted on wheels, which Phil called 'the Ark of the Corvisant.' When the children saw the red box coming they would run and dance about it, much, as I used to imagine, like David of old before another ark, for the little fellow always had largess for them.

Our friend the sausage-maker was a woman, but she was just such another as Mr. Corvisant. If she was paid—good ; if not—well, another day ; but leave her wares she would, and no denial. So we nearly always had goodies and sausages to eat or to sell, if nothing else.

Well, the day on which Phil's teaching experiences ended it was Lent at home. All there was in the house was a loaf of bread and some of Mrs. Hunt's sausages. The latter were hanging on a string in the shop-window in company with a few toys and some jars of sweets. Mother had said that if nobody came in to buy the sausages they should be put in the family pan and fried for dinner ; and we children were in a tremor lest somebody came for them, for we knew that if any one did come for them it was a hundred to one but they would have to be 'put down,' for such a thing as a ready-money customer was now a great rarity, and the result would be that we should be deprived of our dinner, and no help.

Finally the clock struck twelve—the period of anxiety was past, and we saw mother take down the frying-pan—we knew what for. Murietta said : "Mother, shall I fetch the sausages," but, before she had well got the words out of her mouth, the shop bell rang. Mother hurried into the shop, and Mury and I peeped through the

door to see if our dinner was in jeopardy. It was Cousin Jim. What a load was lifted off our hearts at the sight! "How do you do, aunt?" said Jim, reaching his big hand over the counter. "I thought I'd drop in and tell you that your cat's a thief. I just seed him nobble a string o' sausages from the window and make off with 'em."

We all looked aghast into the window: our prospective dinner was gone sure enough.

"It must be that wretched black cat again," cried mother.

"Yes, it was a black 'un," said Jim, "an' he up and stood on his hind legs just like a Christian. I never seed anything like it, and such a whopper!"

"I wish we could find out where it comes from, and how it gets in," mother observed.

"Shall I try to find out?" Jim asked.

Mother said she wished he would; and straightway our cousin went to work, assisted by us girls, for father and the boys had not yet returned. But no cat was found, and presently, in lieu of dinner, we had some tea, Jim assisting.

It was Jim Armit's first visit to the shop, and he was the first of the family that had called on us for a long time. They were not on good terms with us, for what reason we never exactly knew, but it was supposed that their ill-humour had something to do with the legacy of an old eight-day clock Aunt Millerchip had left mother, although it was known that Armit had long set the eye of his affections upon it. Jim was the eldest of a family of six, and was just of age, as he took occasion to tell mother. He likewise informed her that he often passed the house, and had frequently thought he would like to call, but that time was always so short. Now, however, as the ice had been broken, he would be dropping in often, he said, especially as he would be coming to preach now and again at the chapel opposite, having been appointed a local preacher.

Jim Armit a local preacher! So the cat was out of the bag: that was what he came to tell us. Mother congratulated him, and hoped he would 'save souls.' Then they had a discussion on theological matters, wherein Jim was no match for mother, preacher as he was. Indeed, he was as destitute of theology as he was of grammar; but he did not feel the lack of either. As he said: "I goes in for the simple blood and no dashed flummery." As queer a conglomeration of selfishness, ignorance, piety, and audacity as was ever known, was our Cousin Jim, the carpenter. He smacked his lips over huge hunks of bread and treacle, told us he was going to devote himself to the Lord, laid before us his plans for getting rich (one of which was to build long rows of cheap tenement houses, "because they cost nothing and pay well," said he), and asked mother if she did not think the best thing a young fellow could do on coming of age was to get married.

Mother said he might do a worse thing.

"If he can keep a wife, of course," said Jim, explanatorily.

Mother asked who the lady was.

Jim replied that he had not decided yet, but he had got his eye on two or three 'pretty niceish sort of gels.'

One of the 'gels' he had his eye on turned out to be Murietta. We children had sometimes in wet weather gone into the Methodist chapel over the way (and I must say we found it much more amusing than the meetings of the Brethren), and there Cousin Jim had seen us, and taken a fancy to Mury. She had of late shot up wonderfully, and although only turned sixteen, she was taller than mother, and well-made into the bargain, with a clear, rosy complexion, and a bright, saucy eye, that indicated that she had a spirit of her own, which attracts men at first, although they do not like it so well afterwards. As a rule, your ordinary male mortal likes a meek, sheep-like woman, who will do his bidding, contentedly crop the fare he puts before her, and not have too much will or wit of her own. And a good wearable sort I must say they are as a rule.

Jim finished by staying until chapel time (there being a special service that evening, or perhaps it was a love-feast), and asking mother to let Mury accompany him for a mouthful of prayer. After the service he escorted sister back to the door, but did not come in. Before leaving her, however, he said he should be coming often, as he had a mind to keep company with her, if she did not object, because he had a notion to marry soon. Mury told him he might come as often as he liked, but, as to marriage, she should not think of that for some years yet. "Oh, bother that," cried Jim; "time's too short to wait."

Time was always too short with Jim.

The next day, or the day after, our carpenter cousin called again, and paid a great deal of attention to sister, and finished by proposing marriage to her. Mury answered him as before; whereupon Jim told her that he had made his marriage the subject of prayer, and he believed the Lord had answered him. He put the names of all the marriageable girls he knew, written on slips of paper, in the pages of Solomon's Song, and pricked for them, at the same time telling God that the one he pricked the oftenest he would make his wife, and asking Him to guide his hand aright; "and do you know," said he, "I pricked you six times out of ten; so there's no gain-saying that."

(To be continued.)

VIRGIL'S FOURTH ECLOGUE.

SICILIAN muse, O let us sing to-day
Of something more grand. The vineyard not to all
Is pleasant, nor the humble tamarisk.
If we must sing of sylvan scenes, 'tis meet
We make our theme worthy a consul's ear.

The last age of the old Cumæan song
Is now upon us, and the great course of days
Begins again. The Virgin now returns,
And the glad reign of Saturn ; while from on high
A new race is sent down to fill the earth.

O chaste Lucina, favour the birth of him—
The child in whom the iron age shall cease,
And o'er the world from east to west shall rise
The golden : now thine own Apollo reigns !
And in thy consulship, in thine, O Pollio,
Shall this the glory of the age begin ;
Then shall the great days start their happy course.

If any vestige of our wickedness
Remain behind, under thy conduct, it
Shall be annulled, and so the earth be freed
From the dread burden of perpetual fear.

He shall enjoy the life of gods, shall see
Heroes mixed up with gods, and e'en himself
By them be seen : and o'er the peaceful earth
With virtue like his father's he shall reign.

For thee, O child, the earth her rich first gifts
Uncultured shall pour forth ; the ivy bright
Extending everywhere, with bacchar sweet
And colocasia, blended with the fair
And glad acanthus. Of their own accord
The bleating goats shall tread their homeward way
With milk-distended dugs ; and lowing herds
The swarthy lion shall no longer fear.
From out thy cradle shall fair flowers spring ;
Serpents shall die, and bale-distilling herbs—
They too shall perish ; while the Assyrian weed,
The sweet amomum, shall grow everywhere.

But when thou shalt be able to peruse
The praise of heroes, and thy parents' deeds,
And thou what virtue is shalt understand ;
Then by degrees the undulating field
Shall yellow grow with tender bearded corn,
Red grapes shall hang from thorny briars wild,
And rugged oaks with dewy honey drop.
But there shall yet remain some vestiges
Of ancient fraud ; which men shall cause to tempt
The sea in ships, cities with walls to gird,
And earth's broad breast with furrows deep to plough.
Then there shall be another Tiphys, then
Another Argo, which shall carry forth,

As erewhile, chosen heroes; there shall too
Be other wars, and once again to Troy
There shall be sent a mighty Achilles.

But when thou shalt have reached the full estate
Of manhood, then the mariner himself
The ocean shall forsake; no longer then
Tall argosies shall voyage to and fro
With merchandise; but every land shall bear
Produce alike—and bear enough for all.
The glebe no more with harrows shall be torn,
No more the vineyard feel the pruning-hook;
From off his bullocks shall the ploughman take
The yoke. Nor shall the fleecy wool be taught
Tincts various to counterfeit; the ram
E'en in the field shall change his coat, sometimes
Appearing dyed in saffron, and anon
In pleasing purple: vermeil of itself
Shall clothe the sportful lambs. The sisters three,
Concordant with the fixed decrees of fate,
Their spindles have commanded: Thus, roll on,
Roll on, ye ages, after the mode prescribed.

Attempt the greatest honours, for the time
Shall now arrive, O offspring of the gods,
O foster-son, beloved of mighty Jove!
Behold the world tottering with convex weight—
The earth, the wide waters, and the heavens.
Behold how all things at the coming time
Rejoice! O may I but the chiefest part
Of so long life enjoy, and be vouchsafed
Sufficient nous to sing thy glorious deeds.
Not e'en the Thracian Orpheus should outdo
My song, nor Linus; though his father this
And that his mother favour: Orpheus
By Calliopea, Linus by the god,
The beautiful Apollo. Pan himself,
Should he with me contend, and Arcady
Be judge, e'en Pan, with Arcady as judge,
Should own himself to be quite overcome.

O darling boy, begin to recognise
Thy mother by a smile: thy mother dear, who
The weary sickness of ten months has borne.
Begin, O little boy, for he on whom,
When he was born, his parents have not smiled,
Has neither had his table by a god
Honoured, nor yet his bed by goddess blest.

Book Notices.

Wise Sayings. (LUND & Co., the Country Press, Ilkley.) This is a novel little publication, consisting of short, pithy extracts from the writings of great men. These selections are left without the authors' names, and a prize of three guineas is offered to the person assigning correct authorship to the largest number of quotations. November 25th, 1886, is the last date for competitions to be sent in. The little book is neatly got up, and indeed is a choice specimen of the bookmaker's art. It ought to meet with a large sale. The price is sixpence.

Only Half a Hero. (FOWLER, Imperial Buildings.) This little tale of the Franco German War is eminently suitable for a Christmas present. It is bound in a neat cloth gilt cover at two shillings; also in paper at one shilling. For what the press thinks of it see the advertisement pages.

Facts and Gossip.

WE propose to give a Prize of One Guinea for the best Essay on "Size of Brain as a Measure of Power." The Essay must not exceed eight pages of matter when printed in the PHRENOLOGICAL MAGAZINE. Competitive Essays must reach the Editor of the MAGAZINE not later than the 15th of February, 1886. MSS. must be *legibly written on one side of the paper only*. We cannot undertake to return unsuccessful papers unless accompanied by a stamped and directed envelope.

THE alleged discovery by M. Pasteur of a preventive remedy for hydrophobia has earned for that distinguished investigator an enviable fame in his native country; but it is rather singular that French physicians, who decry the inoculation experiments for cholera of Dr. Ferran, should be so ready to jump to a conclusion in favour of Pasteur's similar method in connection with rabies. Perhaps their ready acceptance of the alleged cure for hydrophobia is due to the fact that Pasteur rarely makes a statement he cannot prove; but, if the truth is told, there is at present no proof that hydrophobia is curable. It is quite fair to assume, as Pasteur does, that one of his cases would have developed the disease if his inoculations with the attenuated virus had not prevented it; but the evidence is necessarily of the negative character, and however much it may be hoped that he has succeeded in bringing his long labours to a successful issue, there is reason to fear that his admirers have been too hasty and too positive. Pasteur's discovery of the cause of the *pébrine* disease of silkworms, his method of combating the charbon of sheep by inoculation, and other investigations, have deservedly placed him in the foremost rank, and the value of his system is almost universally recognised; but those who remember how many alleged cures for snake-bite have been discovered in India will await further developments before implicitly believing in the 'cure of hydro-

phobia.' It was demonstrated in India that the alleged cures of snake-bite were due to the fact that the poison of the cobra had not been injected, and it may be that in Pasteur's cases the virus, or whatever it is which causes rabies, was not received by the persons bitten. One thing is certain, that hundreds of persons have been bitten by dogs—mad dogs, too—without experiencing any after symptoms, and until an undoubted case of hydrophobia has been cured, Pasteur's triumph will not be complete. It has already been said that it is practically impossible for any duly qualified man in England to repeat, confirm, or correct his results, until a 'wiser and more humane public opinion' repeals the present restrictions against experiments on live animals; and Pasteur's 'discovery' will no doubt be utilised to its full extent by the Vivisectionists.

MR. JAMES B. MORISON, Greenock, well known as a first-rate judge of Scotch terriers, owns a young bull bitch, closely related to the famous Britomartis. Mr. Morison recently received a young Scotch terrier, which he tied up in his office to prevent its straying. He was absent from his office for a short time, and on his return he found the terrier gone. The youngster from the hills, liking freedom better than being chained to a stool, had quietly gnawed the string through and bolted. But Snider—the bull bitch—was also absent, and this looked suspicious, for she was never known to wander from home without her master. A report was circulated that the dogs were stolen or lost, and the town was scoured by different parties, but no trace of the missing dogs could be found. The search was given up, when, late at night, Snider was seen in the distance making for home, dragging something after her. This was found to be the young Scottie that had bolted. Nearer and nearer she drew, dragging him along, in spite of his endeavours to go the opposite way, and at last landed him at the office door. Not content with bringing him thus far, she endeavoured to drag him up to the spot where he was tied before he broke away. Such intelligence in a bulldog is worth recording.

Answers to Correspondents.

[Persons sending photographs for remarks on their character under this heading must observe the following conditions :—Each photograph must be accompanied by a stamped and directed envelope, for the return of the photographs; the photograph, or photographs (for, where possible, two should be sent, one giving a front, the other a side view), must be good and recent; and, lastly, each application must be accompanied by a remittance (in stamps) of 3s. 6d., for six months' subscription to the MAGAZINE.—ED. P. M.]

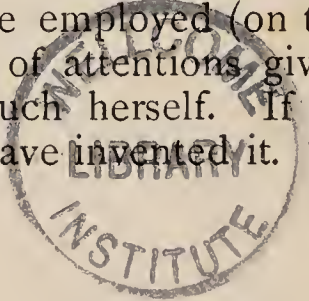
M. L. C. (Limerick).—Your moral and social faculties form the most distinctive part of your character. You are eminently suited to marriage and social life. Your happiness lies there. You will make a true and devoted wife, if you be successful in securing the right sort of man for a husband. You will make friends wherever you go, especially among gentlemen. You are gay, light-hearted,

fond of company, agreeable, and seldom low-spirited; are fond of fun, rather witty, and apt as a mimic. You could take a part in a comedy very well, and would like it. You are a great talker; it is difficult for you to keep still, and there is very little dulness where you are; are benevolent, sympathetic, very conscientious, ambitious, sensitive, and hopeful to a fault. You are clever in many directions, and could make a good, sharp scholar; are critical, and quick to detect a flaw, but are not as steady and protracted in thought as you might be. You require more depth and grasp.

J. E. C. (Grimsby).—This gentleman will surprise most of his friends, and in some respects will disappoint their hopes. He has considerable ability, best characterised as cleverness; but he will not display as much stability as is necessary to balance his powers. He has a somewhat showy intellect, and will dazzle in many ways; is witty, critical, imaginative, fluent in speech, and gifted as regards the marvellous quickness with which he picks up and uses information. He has some artistic, but more literary and histrionic, ability. The fear is that his many gifts will cause him to go from one thing to another and not make himself sufficiently proficient. His effort should be to keep himself steady, to guard his impulses, and to encourage general stability of purpose. Too much of a general lover.

E. M. P. (Leeds).—All a woman, with a woman's strengths and a woman's weaknesses. Sprightly, lively, genial, almost *spirituel*, with a happy knack of making friends and making herself agreeable to them; with not much wit, but with a fund of good-nature; easily made cross, and as easily gay again; like a stream on a May-day, all light and shade, smiles and frowns, but with the light and the smiles predominating. Not talented, but clever; not uniformly of a worshipful disposition, but dutiful, desirous of doing right, and affectionate up to the hilt. As a mother she would almost spoil her children, and her husband would run the same risk. She is very shrewd, a great critic, quick to find faults and to point out discrepancies; very hopeful and sympathetic, and never happy long without a good talk.

F. S. (Leeds).—The photograph is not very good, and the hair is done up in such a way that it is impossible to judge well of the character as a whole. But so far as we are able to judge we should pronounce F. S. to be a young lady of sufficient intellectual ability to be worth careful training. She has a fair memory; is naturally orderly and methodical, rather tasteful, and possessed of some musical gift. Her organ of Language is fair in development, but not large. She is capable of strong affection, although at first she may appear somewhat flighty and unsettled; is fond of praise, and will do much to gain the goodwill of those she knows. She is naturally active on her feet, and should be a capital dancer; is a good worker, and likes to be employed (on things that she likes to do); will be rather jealous of attentions given to others, and will never think she gets too much herself. If kissing had not been invented before, she would have invented it.



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